Volume 5, Number 1
February 1974

A publication
of the
Ontario Institute
for Studies
in Education

Ideas
about Teaching
and Learning

ORBIT 21

All About Us/Nous Autres

The cover of this issue comes from a Canada-wide project called *All About Us/Nous Autres* that has been initiated by Betty Nickerson, author and sociologist with a profound understanding of children's art who directed the 'From Youth With Love' pavilion at Man and His World '68. She believes that by stimulating the creative awareness of Canadian children all of us will acquire a deeper appreciation of our country. With initial funds from a LIP grant and a three-year development grant, *All About Us/Nous Autres* is collecting children's poems and paintings, stories, essays, and photographs as a vehicle for sharing ideas among Canadians.

In her project Betty Nickerson invites all young Canadians from six to eighteen to send their creations either individually or through schools and clubs. She and her staff of six young adults promise that 'ideas well expressed will be circulated across Canada as exhibits, books, broadcasts, and slides.' The address to which materials (together with name, age, and address) should be sent is: All About Us/Nous Autres, Box 7000, Ottawa.

The project's first exhibit, consisting of over two hundred paintings and drawings, opened at the National Arts Centre in Ottawa in August 1973, and since then has been traveling across the country. A small book of paintings and poems is in print (available from the project for $1.75), and a large anthology of poems is scheduled for spring publication. The 1974 exhibit will première in July during Festival Canada at the National Arts Centre. Our cover is taken from a painting by Janet Guthrie, age 14, of Barrie, Ontario.

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The Director is the Chief Executive Officer of the Institute and is responsible to the Board of Governors. His tasks include the provision of leadership in the establishing of priorities and in the ensuring of the financial well-being of the Institute. The Director is also expected to maintain liaison with the ministries of Government and with the community in order to assess educational needs.

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A Publication of the Ontario Institute for Studies in Education

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Editor: Hugh Oliver
Assistant Editors: Jean Shapter, Catherine Cragg
Designer: Burton Kramer Associates Ltd

Consultant Panel: W. R. Wees (Chairman)/J. Main/D. Ellis/D. Hunt/F. Rainsberry, OISE
M. F. Grapko, Institute of Child Study
Miss F. Henderson, FWTAO
Miss C. Foisy, OECTA

Audience: *Orbit* is published by the Ontario Institute for Studies in Education for everybody involved in or concerned with education.

Content: *Orbit* features information about educational research and development and, in addition to discussing work carried out by OISE and schools across Ontario, draws on material from other Canadian provinces and other countries. Les articles qui intéressent surtout les francophones paraissent en français.

Contributions: We should be glad to receive from readers articles about educational practice, criticisms of past issues of *Orbit*, and suggestions for future issues. Before submitting full-length articles, for which an honorarium will normally be paid, a preliminary letter should be sent to the editor.

Indexing: *Orbit* is indexed in Current Index to Journals in Education and Canadian Education Index.

Subscription: $3.00 per volume (5 issues). Not published in August. Available only to subscribers; no individual copies for sale. Subscriptions should be addressed to Publications Sales, OISE, 252 Bloor Street West, Toronto, Ontario M5S 1V6. Please enclose a check or money order payable to the Ontario Institute for Studies in Education.

The World Religions Course

A Beginning

John E. Meyer,
Researcher & Project Director,
Moral-Value Education Project Office,
Hamilton

In January 1966, an Order-in-Council established the Committee on Religious Education in the Public Schools in the Province of Ontario. Three years later, in what has come to be known as the Mackay Report, the committee published its findings. Although the report was not tabled for legislation it attracted considerable support, and representations for at least partial implementation were made to the Ministry. Of the committee's twelve recommendations, number 8 is significant in this context: 'We recommend that a formal course of study dealing with the principal religions of the world be offered as one of the optional courses in grades 11 and 12 in the secondary schools. Instruction in these courses should be given by members of the history department.'

Two years passed before introduction of a world religions course became educationally and politically expedient. The first official move came in October 1971 with the publication of *Guidelines: World Religions* by the Ministry of Education. The Ministry encouraged local boards of education to seek approval for courses to be offered in the 1972/73 academic year, and in the summer of 1972 one hundred and thirty public and private secondary schools had courses approved. This number represented approximately one-fifth of Ontario's secondary schools.

In recent years, curriculum development – including innovative courses – has become increasingly a local affair within the broad guidelines of the Ministry of Education, but means of assessing what has been done in this area have not kept pace. However, in July 1972 the Ministry included in its competitive funding program a local world religions curriculum development and assessment project of one year's duration. This project, under the aegis of the Hamilton Board of Education, involved a teacher who was offering the course and a staff member from the board's project office. The aims of the project were (1) to identify and evaluate the needs and response of the students enrolled in the course, (2) to identify and evaluate the needs, methods, and competency of the teachers involved, and (3) to identify and evaluate the availability, utilization, and appropriateness of resources in the schools concerned.

The project team collected and analyzed data in what were called the 'extensive' and 'intensive' spheres. The former included schools throughout the province offering the course; the latter, the Hamilton-area schools (eight public and two private) chosen for close participation in the project. In the extensive sphere the data were gathered from a questionnaire and from visits combining classroom observation and interviews. In the intensive sphere, in addition to observation and interviews, the researchers employed pretests and posttests of attitudes and a cognitive test, and school staff were involved in an in-service program.

Technical difficulties imposed limitations on both collection and analysis of data and we were obliged, in our assessment, to rely heavily on descriptive statistics and intuition.

Extensive Sphere

Through a questionnaire sent early in the year to schools offering the world religions course, we found the following:
Students enrolled in the course were predominantly of Christian heritage, with a small minority of non-Christians included in heavily populated areas.
Student interest level was moderate to high.
Teacher participation, for the most part, resulted from one of two reasons: a high degree of self-motivation, and the decreasing enrollment in the traditional subjects. About 50 percent of the teachers involved had had some formal religious education.
Students and teachers agreed that the inquiry method afforded the best approach and should be plentifully supplemented with audiovisual resources, guest speakers, community visits, and class discussions.
In at least half of the participating schools, class enrollments ranged from twenty-five to forty.

Through a follow-up letter, we discovered where the stronger programs were functioning and immediately arranged visits. Between November and May we visited some thirty-five schools, including five francophone schools, in six centers. During these visits, one team member observed the class in session and the other interviewed a small sampling of students in a relaxed group setting. The sampling was selected by the teacher in cooperation with the project team and included 20 percent of the class enrollment. We were interested in the whys and hows of the course and in the learning environment in which it operated. Our findings indicated that:

1. Students were motivated by a genuine desire to learn about world religions.
2. Multiple and flexible teaching techniques provided the most effective approach.
3. Favorable student reaction was in direct proportion to a selection of content that was stimulating while still being of manageable dimensions and to the degree to which the students felt personally involved.
4. Students and teachers felt a need for more meaningful instructional materials, increased opportunity for relevant experiences in the community, and additional class time (which might be provided through a two-year sequence or through semestering).
5. Cooperative liaison among teachers would benefit both students and teachers.

Although some analysis is inherent in these findings, additional comment is in order. While many factors contribute to the success of a given course, we found that in the world religions course the teacher was the most crucial. In the most successful classes, the teacher was skilled as a facilitator and had a genuine interest in the subject. A background of extensive academic and religious studies was not essential to success and could even impede it if expressed in hard-core presuppositions and expectations. The best teachers learned with their students and utilized every opportunity to enrich themselves.

Intensive Sphere

The ten Hamilton-area schools received frequent visits from the project team. They were also involved in a monthly inservice program, in quarterly assemblies of cluster schools, and in the computerized cognitive and affective measurement of students. The results throughout corroborated findings in the extensive sphere.

Recommendations

The project team recommended that:

Recommendations 9 to 12 of the Mackay Report be implemented. (These recommendations have to do with the appointment to the Ministry of Education supervisory staff of personnel with background in the academic study of religion; the establishment of an advisory council; the provision of teacher training in the area of religious information and moral development; and the recognition of studies in religions as constituting a subject area for teacher certification.)

Research projects concerned with religious education and moral or value education be encouraged and funded.

Attention be given to the formulation of valid instruments for evaluating cognitive and affective achievement in the world religions and other religious or moral education programs.

Strong encouragement and assistance be provided for the use of multimethodological approaches in the study of world religions.

In-service programs be encouraged, improved, and funded where necessary on a merit basis.

Cross-school assemblies be encouraged for purposes of providing exposure to community expertise and resources to students enrolled in world religions courses.

Exposure and treatment of controversial religious value issues and meaningful question areas be encouraged in a mature and objective format.

As *Guidelines: World Religions* suggests, a two-year course be encouraged and monitored.

Both content and form be more widely extended to include the broad humanistic and moral dimension of our society.

Immediate effort be devoted to assuring that both appropriate accreditation and teacher training opportunities are provided in faculties of education.

Competent supervisory personnel be added to the appropriate levels of educational administration, through direct employment by the Ministry of Education or through funding at the local board level.

Instructional objectives in the study of religions – the philosophical foundations, the nature, and the techniques – be widely studied in the process of curriculum design and implementation.

More effective liaison be established between secondary schools and pre- and post-secondary educational institutions with regard to education in world religions and allied programs.

Careful analysis be made of the need for special funds to implement the program, and of the need for research aid for pilot projects.

Enrollment in this field be restricted to approximately thirty students per class to ensure maximum involvement and effect.

Instructional materials, particularly easily accessible multimedia packages, be created by OECA or another appropriate educational service.

Conclusion

The shortage of instructional materials in world religions was relieved recently by the publication of two books by teachers in the field and by the production of audiovisual materials by OECA. The books are *The Many Faces of Religion: An Inquiry Approach* by Dicks, Mennill, and Santor (published by Ginn and Company) and *What Man Believes: A Study of the World's Great Faiths* by Evans, Moynes, and Martinello (published by McGraw-Hill Ryerson). The OECA videotapes include a seven-part series designed to portray experience of the major religions and a three-part series concerned with appropriate teaching strategies. Negotiations are under way to provide clearinghouses for distributing these tapes outside Ontario.

Public and professional support of the world religions program has been positive, and the members of the project team have been greatly enriched by their involvement. Interest in world religions is growing steadily, and it appears that some two hundred secondary schools across the province will offer it as an option in 1973/74. The beginning augurs well for success, and we now see encouraging signs that an integrated program of moral education may soon parallel the world religions course.

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The following accounts by two Hamilton school teachers of world religions courses that they have taught are taken from Dr. Meyer's research project report.

A First-Year Course

Stephan Barrs,
Sherwood Secondary School,
25 High Street, Hamilton, Ontario

A classroom can restrict learning, but so can an open field, a concert hall, or a church. Learning requires a positive and energetic attitude on the part of those involved, and only in a sympathetic atmosphere can such an attitude flourish. People involved in the learning process must give of themselves if they are to receive its benefits. This is particularly true of the world religions course. People who are negative or disinterested learn little from such potentially enriching experiences as the musical *Godspell*, an Orthodox Jewish wedding, a monastery retreat, a lecture on Hinduism, a trip to the Mennonite community, a visit to a mosque or a Buddhist temple, an overnight stay on an Indian reservation, or a yoga demonstration.

In the first or in the fifteenth year of a world religions course, the learners must include both students and teacher; from the very beginning I impressed upon my students that I was a learner like themselves and my opinions were no more valid than their own. The students responded by assuming much of the responsibility for planning course activities, arranging visits, and bringing in guest speakers. There was constant feedback throughout the year and we solved problems together as they arose.

The students were warned, before the course began, that it would be difficult and would require good research techniques, reading and writing skills, and involvement in activities outside of school time. A standing of 70 percent in a previous history course was an admission requirement. Twenty-nine students enrolled. By November the class had developed a positive identity. Out of this grew class pride, a sense of belonging, and a feeling of security and trust that enabled the students to express their hopes and fears. These essential affective objectives were achieved within the scope of the greater affective objective of awareness of our own identities, beliefs, and purposes. We went a long way in matters of self-awareness and, in so doing, counted the course a success.

Throughout the year, student initiative was responsible for many creative and enterprising projects. Role playing became a favorite means of experiencing the ceremonies and rituals of the religions under study. Cartoon making proved to be an experience in itself, and the planning of a cartoon of the Garden of Eden provoked spirited discussion of the symbolism involved with Adam, Eve, the snake, the apple, and God. When it was completed, this particular cartoon was put into animation under the direction of a professional film producer.

Trips were an important part of the course. Many things that were central to our study could be experienced first-hand in various parts of the community. Whenever possible we took along audio-visual equipment and made a record of the trip. We took television camera shots of a Mennonite community, 8 mm. movies of a monastery, tape recordings of an interview with the *Godspell* cast, slides of a London mosque, and videotapes of auditorium programs.

At the year's end, the world religions course was described by our students as an experience that fosters toleration, maturity, and self-identity. They saw the course work as difficult but very worthwhile. Perhaps the most significant measure of our success is the fact that enrollment in the course has more than doubled for 1973/74.

A Two-Year Experience

Catherine B. Stidsen,
Cathedral Girls' High School,
467 Main Street East, Hamilton, Ontario

In November 1971, when news stories about a secondary school credit course in world religions appeared, our school introduced a pilot course. Six grade 11 classes and two teachers were involved. The experiment went well, and in March 1972 we submitted plans to the Ministry of Education to introduce a credit course the following September. Our plans were approved, and by the end of the spring term 100 grade 11 and 12 students had enrolled. In September the enrollment had risen to 118, divided into three classes; I was the only teacher.

We were determined that this would not be a disguised Catholic apologetics course. Each religion – including Roman Catholicism, the denomination of most of our students – would be studied as a world religion that appeared at a historical moment and provided certain directions, motivations, and insights to man's quest for meaning in life. Vatican Council II had urged such inquiry on Roman Catholics.

We drew material for the course from all available sources. I catalogued appropriate films available from the public library and checked the OECA guide regularly for related videotapes. Throughout the year, I kept a constant watch for television documentaries that would provide course enrichment. Our library acquisitions included well-illustrated books on world religions (including the *Life* series and National Geographic publications).

The course got under way with five days of discussion about what religion is. The students differed widely in their interpretations; they soon learned that experts do too. We spent the next two weeks developing topics for use in the study. These were based on questions raised by the students and included such considerations as 'What the god, deity, or supreme being (if there is one) does for man,' 'The role of women in the various religions,' 'Occult practices (if any) in the religion,' and 'Relevance of the ethical position of the various traditions.'

Students compiled their own learning objectives and, with sets of their topics before us, we began a two-week film survey of the major religious traditions. Synopses of these traditions were posted on class bulletin boards and the library featured a related pictorial display. During this period, each student chose a religious tradition for personal in-depth study throughout the year. This study concluded with each student submitting a written report at the year's end. Each girl was also required to prepare a report for the class on a religion she found particularly appealing.

We began our study by working, one topic at a time, through the various religions in chronological order. Again we viewed films, but this series dealt with the subjects in greater depth than those used in the survey course. We had two complete showings – one each semester – covering all thirteen areas of study. The students made notes and recorded their reflections in a journal.

We stressed creativity in student presentations and encouraged the use of audiovisual aids. The girls were quick to respond when they discovered that the most interesting presentations featured audiovisual materials. Sometimes students made their presentations more colorful by appearing in the national costume of a country in which the tradition under study predominated. By mid-November, the girls were aware of the opportunities afforded by self-teaching and were enthusiastic about it.

During the fall examination period, world religions students constructed in the gymnasium displays relating to their course. Shinto shrines and Jewish sabbath tables appeared, an ancient Chinese funeral took place, and 'Muslim' ladies built the cave in which Mohammed experienced his revelations. The displays were well enough done to be the subject of an illustrated feature story in the local newspaper.

In the second term, I asked the students to visit someone in the religious tradition chosen for personal study, and to concentrate particularly on finding out what was involved in adhering to it in Canada today. There was some opposition. 'Where,' asked one student, 'can I find an ancient Egyptian?' But eventually reports began to come in. They described visits to synagogues and Protestant churches; participation in a Hindu celebration for the Goddess of Learning; an afternoon spent in a Japanese home discussing haiku and learning to make origami; and a trip to the Royal Ontario Museum to visit the ancient Egyptian. This phase of our study brought an unexpected bonus in the form of class visits made by a United Church minister and a Cayuga Indian chief.

As we finished each topic, we took a day or two to reflect together on what we had learned. The Amerindian and Shinto identification with nature afforded new insight to students living in a city plagued by air pollution; Hindu and Buddhist regard for all life stimulated deep thought in the minds of young women daily exposed to television violence. These periods of reflection were highlights in the course. They afforded us an opportunity to discover what the experience meant to us personally and to draw from it enriching influences that gave greater meaning to our lives.

We conducted no formal examinations in connection with the course; each day was an examination. There was, of course, an evaluation of student progress at the end of each term, and at the end of the year, in addition to making my own assessment, I required each student to submit a self-evaluation in writing. I also required each student to give me a written statement of the ideas she held about religion in September and those she held in June, her suggestions for improving the course, and her evaluation of my leadership.

Enrollment in the course for 1973/74 is much lower – some 35 students. World religions is competing with theater arts, music appreciation, and art, and it seems that many students regard these other options as less demanding and, for that reason, more desirable. So far, however, our experience with the world religions course has been positive. In a year-end survey, 86 percent of the students labeled it 'exciting'; for the teacher, it was both exciting and personally fulfilling.

Note:
Copies of the complete research project report on World Religions in Ontario are not yet available pending publication arrangements. Your interest in such may be registered with Dr. John R. Meyer, M-V Education Project Office, 220 Dundurn Street South, Hamilton, Ontario L8P 4K7.

Mathematics through Playing

O. Weininger,
Department of Applied Psychology, OISE

The process by which children become acquainted with basic language skills seems a relatively obvious one. They watch, listen, and talk with increasing fluency – frequently using a mind-boggling vocabulary long before they are ready for kindergarten. The acquisition of mathematics concepts, however, is more difficult to trace, and a wide gap separates the day when the clever two-year-old counts to ten and the day when he puts his knowledge to use in a classroom. How does a child acquire competency in handling number concepts? What can the parent or teacher do to increase his skill in working with numbers and, more important, his understanding of exactly what a number is?

The answers to these questions spring from a general concept that Inhelder has stated as follows: 'The development of knowledge seems to be the result of a process of elaboration that is essentially based on the *activity* of the child.' The activity of the child is play; thus the most natural and efficient way for a child to acquire competency in mathematics is through play.

Children need to go through various kinds of experiences to learn about mathematics – both things that they do instinctively by themselves and with other children, and things that are planned for them, first by the parent and later by the teacher. The child does not grow in limbo but rather in a guided program provided by a teacher who acts as director, helper, critic, adviser, and catalyst. The teacher helps the child to play productively by bringing into the classroom materials that will assist him in acquiring the basic ideas essential to an understanding of mathematics. When she feels that he is ready to extend his play and to absorb new ideas, she increases the complexity of the material but is careful to give him the time he needs to incorporate his ideas into his play. She does not, for example, introduce measurement while he is still strictly concerned with the manipulation of objects. She rather fosters development of concrete thinking in the child in several important ways:

1. By providing frequent opportunities for him to be with her, to show her what he is doing and talk to her while he plays.
2. By limiting the choices of objects so that he will become as familiar as possible with each object in turn.
3. By helping him to extend himself. For example, she may encourage him to proceed from the simple manipulation of blocks to the building of block towers.
4. By introducing a supply of props to help him learn to sort, classify, and order when he is ready to move from the concrete manipulation of objects to symbolic use of them, so that he begins to form foundations for inductive reasoning skills.

The child's play will move from simple manipulation of objects to comprehensive reasoning when materials and guidance are provided. For example, he may be given a box filled with cars, trucks, jeeps, station wagons, buses, and so forth. At first he will examine them, perhaps choose a favorite, make sounds with it and run it back and forth on the floor. Later he will probably line up all the vehicles and gradually *sort* them according to *type*. Given other kinds of machines, such as boats or planes, he will begin to *classify* them according to *genre*, stating the reasons for his classification if someone is there to listen. Then he may be ready to collect equipment for a train or fire station or gas station game, thus *ordering* according to *operation*. At this point he is using reason, for it is reason and logic that tell him that the fireman's hat belongs to the fire station operation, and the conductor's hat belongs to the train, and that a ladder may be used for both. He has begun to *organize* himself, and to plan his play and activity.

At this point, the child may begin to experience the concept of *sign* – that is, the use of a sign to denote how many. He sees that he has one fire station but several fire hats, for example. Now he is ready to deal with number concepts and number recognition. He has come a long way from the two-year-old who parrots off the numbers up to ten, gleefully unaware of missing ones in the middle as long as he begins with one and ends with ten.

There are several ways to assist the child in learning number concepts and recognition. Tally and concept of sign can be introduced by playing a game of catch and tallying the individual throws and catches, or by playing a game of telephone calling and tallying the number of calls made. Given a pad and pencil, the child will tally just about anything that comes to hand. As he tallies and counts to reach a total, he is talking to other children and to the teacher and learning how to relate through language the numbers and number concepts he is learning. He imitates both other children and the teacher. At this time he is ready for a number line, a simple chart built up in equal units to show how many catches he made today, yesterday, and the day before, or how many telephone calls he made yesterday and today, or how many days have gone by this week.

Next comes the recognition of numbers, which the teacher can facilitate by setting up the classroom so that the child becomes aware of the different numerals. For example, she may have a calendar on which she circles today's date, or a pad on which she counts the days until the arrival of special events, or a clock on which the hands are set for special times (like recess or lunch) for the children to compare with the real clock.

The teacher may also set up learning bays where the children can experiment in meaningful ways with meaningful numbers. The store is about the best way to introduce number concepts. The child can buy from the store, sell to his peers, make change, and keep records of the transactions. He learns number recognition when another child asks how much something costs; he learns addition and subtraction by making change. He learns how to print out what the store sells and how much it costs; he helps others to read because they ask what he has to sell. He is traveling in learning at his own speed with the ready help of the teacher and the other children.

A useful piece of equipment for developing an understanding of numbers is a simple pair of scales. The child weighs objects, records the weight in numbers, and compares the weights of various objects. He develops an understanding of the relationship of volume to weight by filling containers with sand, pebbles, acorns, or sticks and weighing them.

As he makes use of these games and materials, the child learns to write numbers because they are necessary to him in what he is doing. He gains an understanding of such concepts as heavy and light, big and small, more than and less than, because they too are part of his play. The teacher asks questions and guides him toward an extension of his thinking and play so that he begins to learn concepts that are quite complicated, like things weighing the same although they are of different sizes. He is stimulated to explore and experiment when he comes on a situation or event he does not understand.

Soon the child is ready for games that require him to use mathematics. He can play with dice or dominoes, keep track of scores in snakes and ladders, and play bingo. Best of all, he enjoys what he is doing – he enjoys learning.

This kind of guided play provides a solid knowledge of basic mathematical concepts and allows children to learn at their own rate and with deep enjoyment. But how do you know where to go and how fast to travel with each child? Margaret Wettlaufer, Director of Kindergartens for the Toronto Board of Education, offers the following as a guide in evaluating a child's progress along a continuum of concept learning:

1. Does he count consistently more than twenty objects, or does he get mixed up when he counts?
2. Does he organize his paintings so as to have a sky, land, a house, a tree, in detail and in relation to each other, or does he scribble a painting with no organization?
3. Does he carry out complicated directions independently, or does he seldom seem able to follow what is asked of him?

4. Does he initiate tasks for himself, or does he just sit and wait to be told what to do?
5. Does he follow through on activity consistently and independently, or does he wander all the time?
6. Does he think in a logical fashion – 'My knee hurts because I bumped it on the table.' – or does he seldom think logically or explain what has happened?

The variation between logical function and irrational or inadequate behavior is great, and the child who experiences difficulty in any of these areas needs to go slowly and to stay with concrete operations until, in terms of the above criteria, he seems ready to move on to operations involving symbols and logic. But the use of rigid evaluation scales is undesirable because they force the teacher back to paper-and-pencil testing and evaluation and limit her ability to see the child's development as a continuous sequence.

Watching a little child absorb knowledge, ideas, and feelings about the world he lives in is a wonderful experience. The thoughts and conclusions that filter through his mind, surfacing in cryptic statements that may have no apparent connection to what is going on at the moment; the reasons he assigns to natural events (like the sun going to sleep every night and making it dark because he sleeps better that way); the questions he asks that no adult can answer without extensive mind-scrambling – all these things are continuing evidence of the marvelous process of learning going on in this complex and fascinating small person. It seems to me of paramount importance that this process not be mangled beyond hope by well-meaning but rigid adults who seek to stratify and fasten down the child's mind by 'teaching' ideas or facts rather than allowing him to learn them in his own way and at his own speed. It is easy to forget how children acquire knowledge and to assume that it has some connection with 'lessons' or 'grades' or 'visual aids' or other purely external and neatly compartmentalized adult ways of observing and classifying things. As Edna Mellor states in 'Education through Experience in the Infant School Years':

'They pick it up here and there, sometimes at a great rate and sometimes very slowly. It is not parcelled up for them in neat packages labelled "handwork, art, language, numbers," but is bound together by the unity of their vast experiences. They learn by watching, listening, and noticing, by feeling, handling, and trying things out.'

Perhaps one of the best ways we can help children to learn is to resist the very adult impulse to teach them something we feel they should know. The two-year-old who shouts joyously 'one, two, three, five, eight, nine, ten' does not need to be drilled until these words that were fun to say make sense in an adult way. To do so is to expose him to a limiting rather than a learning experience. Don't steal his chance to play and learn and grow and enjoy!

Clustering: A Synergetic Approach to Learning

Mervin Lane,
Santa Barbara City College, California

Learning at all levels consists of an interchange between resources and needs. Traditionally, the prime classroom resource is the teacher and the needs relate only to the students. In the authoritarian setting that this attitude begets, learning becomes a sort of passive receivership – a dangerous situation, particularly for the humanities where ideas are the mode of entry to a subject and vision illuminates the whole.

In continuing education, the spread in the age and maturity of students in the classroom is a further complication. By and large, teachers learn to live with it, but they seldom turn it to advantage. For the humanities, however, where these factors bear heavily on the interpretation of subject matter, heterogeneous grouping too has special implications.

In the 1973 spring semester, an attempt to create a more effective learning situation in the humanities classes at Santa Barbara City College focused on these two problems. The experiment sought to reduce authoritarianism and to capitalize on heterogeneous grouping. The vehicle used was a new teaching method based on the principles of synergy and clustering.

Strictly speaking, what was involved was *synergism*, which Webster defines as 'the simultaneous action of separate agencies which, together, have a greater total effect than the sum of their individual effects.' Applied to the classroom, it is expressed in the increased productivity that results when the knowledge and ideas of students and teacher combine and interact. At the beginning of each semester, students come in as separate entities with separate strengths and weaknesses. If these attributes are allowed to combine and interact, more learning potentialities result; if attitudes are positive, these potentialities become kinetic and more learning actually takes place.

To illustrate this, let us look at a student writing assignment. Usually students bring their writing assignments to class on completion and hand them to the teacher. The teacher reads them, marks them, comments on them, grades them, and returns them. The students are treated as sovereign entities; their papers have little bearing on the learning process that goes on in the classroom. Their prime relationship is with the teacher, and no provision exists for exchange among themselves. In a synergetic approach to the same assignment, the students bring their papers to class. They group themselves in threes, exchange papers, and spend a period reading, discussing content, and questioning each other. At the end of the period, each student takes his own paper, adds to it any new ideas he has picked up in the exchange, and gives it to the teacher. Another whole range of learning dynamics has come into play; the student learns more about his topic, his peers, and himself. He learns to function cooperatively, sharing his own strength or weakness and experiencing a broader learning effect.

Another example of a synergetic procedure – and one that extends beyond the classroom – is a resources–needs exchange. The principle of shared strengths and weaknesses is at work in exactly the same way here. In the usual class setting, the teacher presents the subject matter and the students relate to him. They know little about each other and tend to be reticent and noncommittal in class. By the end of the semester they know each other after a fashion, through contacts in and out of class in which the teacher has little part. They are, however, a group of people associated for a time in a similar activity, and a pooling of their resources and needs will enrich the experience for all. By providing for this exchange and interchange, the teacher takes an initial step toward group association.

A resources–needs exchange operates very simply. At an early meeting, the teacher asks the students to be prepared to state in class a resource they can provide and a need they are experiencing. The resource is defined by the teacher as something the student knows so well that he can teach it to others. If a student has a number of resources, he is advised to choose the one he knows the best. The need is defined by the teacher as the most urgent requirement the student has at the moment. Needs and resources are not necessarily confined to the context of school.

When the class meets for the resources–needs exchange, the students sit in a circle and each in turn states his name, his resource, and his need. Ditto masters are circulated and the students write this information down in synoptic form so that the dittos can be run off and distributed at a subsequent class. The teacher draws attention to 'matchings' and perhaps discusses the resources and needs of other classes. By initiating exchanges in all of his classes, he provides more opportunities for matching and general interchange. As a result, students who otherwise might never have made contact can help each other by sharing their respective knowledge and need.

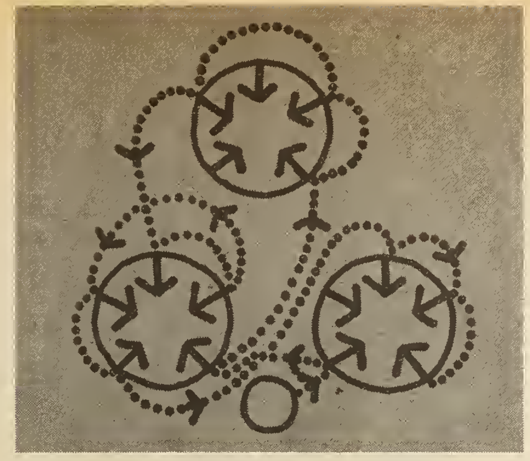
Again the range of dynamics is greatly increased. The atmosphere becomes more congenial; the students are more familiar with each other. Individual aptitudes and ineptitudes are acknowledged, and similarities and differences are recognized. The point here, aside from the synergetic one, is that through this procedure the student learns one of the important lessons of community and communication – that the strength of both depends on the exchange and interchange of what is and is not known. This is also the crux of the learning process.

We come now to clustering. The cluster is a more or less circular concentration of members around a particular point or locus and implies closeness and collaboration. The terms 'group' and 'grouping' do not carry these connotations. I define clustering as *an active group exchange or interchange of three or more people who center their attention around a particular objective*. In a class of thirty-three students there may be as many as eleven clusters or as few as four, depending on the kind of objective. It is expedient and economical, for instance, to read papers in clusters of three. No one is left sitting, and discussion after reading is manageable and efficient. In more general discussions, or when the students are feeding in responses to the same problem or question, clusters may be larger. But clusters of more than eight people are not practical for maximum participation of all members. If numbers are large, it is better to form additional clusters than to risk unwieldiness by enlarging existing ones.

What distinguishes a clustering arrangement from general 'rap' sessions and open discussions is that clusters are formed for specific reasons, objectives, and tasks. Clusters attempt to solve problems or open them up for closer inspection, to respond to questions, to find solutions, to exchange information, to provide for an interchange of papers, to evaluate and grade papers, and so on. The possibilities are numerous and become workable when they have a definite objective.

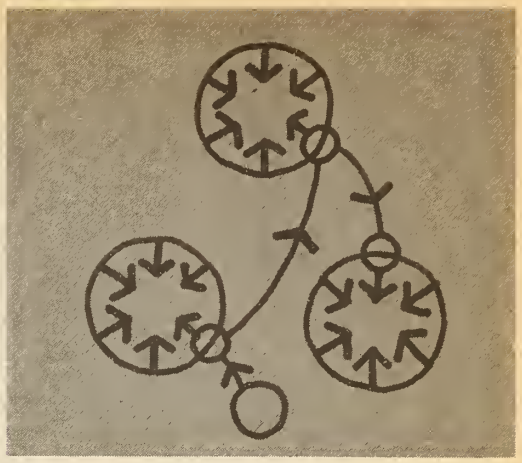
A variety of cluster shapes may be used in class. The open and flexible nature of clusters makes it possible to adapt them to many situations. They are particularly effective in bringing individual problems and difficulties into the open. Clustering combines well with other teaching techniques, and this is important to the teacher who functions in a variety of ways depending on the subject at hand, his own objectives, and the best interests of the learning situation. He may lecture one day, use clusters the next, show a film the following day, and so on. His use of clustering can be flexible; he can build up or break down various kinds of cluster arrangements easily and quickly.

Diagram 1



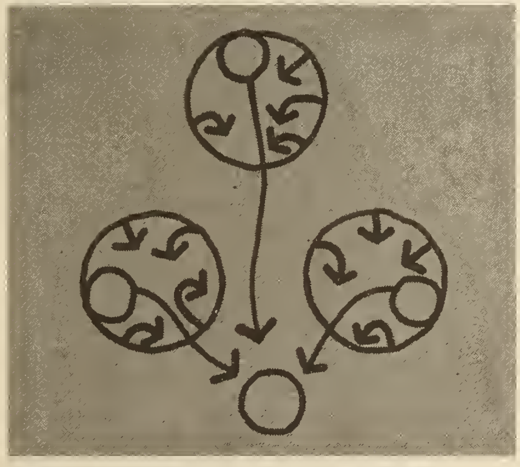
Teacher contact and circulation

Diagram 2



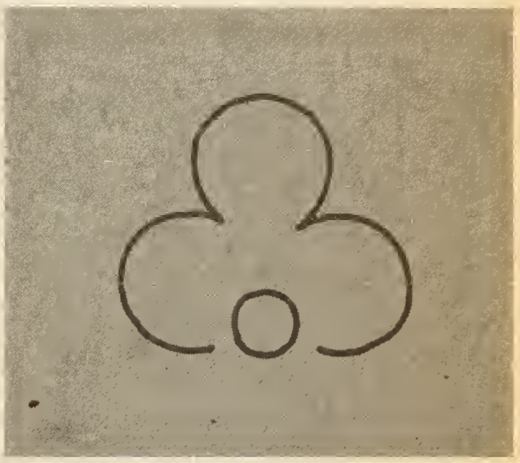
Teacher sitting in

Diagram 3



Teacher collating group responses using spokesmen

Diagram 4



Post-cluster discussion with teacher

When clusters are operating, the teacher has a number of options. He may circulate among the clusters (see diagram 1) or he may sit in with the students and participate in the exchanges (see diagram 2). He may audit one cluster or several at a time. He may talk to a few students who have specific problems. He is primarily a facilitator and is free to play multiple roles as needs arise.

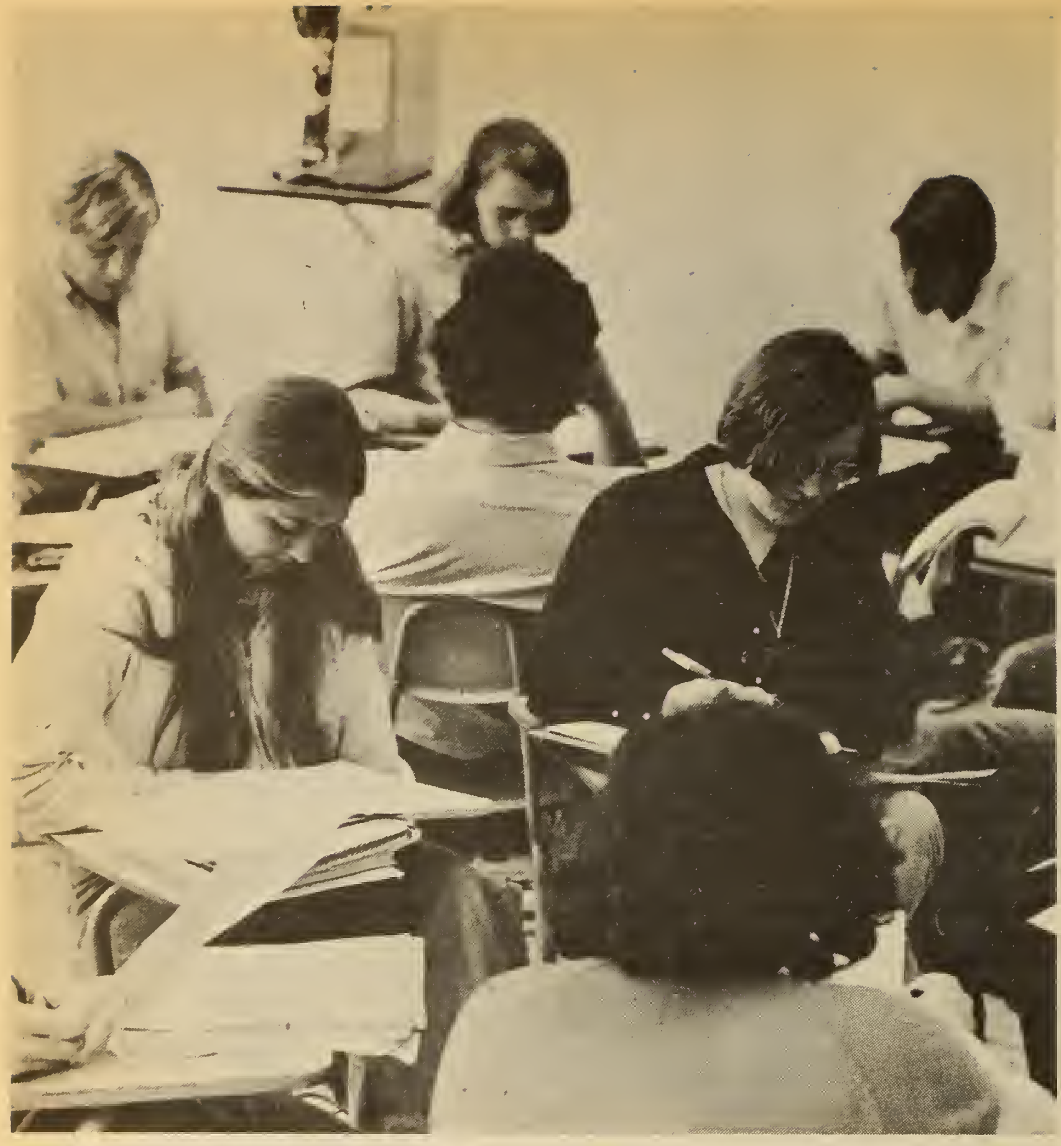
But the teacher's most important role is that of collator, and clustering will not work well if he neglects it. The procedure cannot be synergetic unless there is an attempt at synthesis. The students need to know what goes on outside of their own group and the teacher must bring together cluster interchanges and tie in cluster activities. He may do this toward the end of the class session or, if time does not permit, at the beginning of the next one, having volunteers report cluster findings or spokesmen summarize discussion (see diagram 3). He may have a post-cluster discussion to make a point he wishes all to consider and respond to (see diagram 4). Sometimes the teacher may write out and duplicate his recapitulation of what went on in class. This procedure is valuable because the material can be used by the students to extend or clarify the classroom experience.

Let us now look at certain areas in which clustering operates productively and where the synergism involved permits more learning to take place.

Questions

Questions are the hub of dialectic and each teacher has his own way of bringing them into play. In literature and in the humanities in general, they are the catalysts that bring the students into touch with the subject matter.

Clustering enables several people to work together on questions and in so doing to exchange their varying approaches, types of reasoning, and thinking. In the traditional arrangement, where the teacher asks a class a question and calls on one student at a time for his response, this does not usually happen. Most of the other students are not involved in the dialogue between student and teacher, and the burden of getting more students involved falls on the teacher. But when clusters deal with



specific questions more students become operative and involve themselves.

Questions from both students and teacher can be used as cluster material. The teacher may collect student questions and choose only the most interesting ones. If he uses question sheets, he may suggest that each student take up, say, four questions chosen from areas of personal interest. He can fill in those that the students avoid when, in his role as collator, he makes the cluster responses available to all. This is simply shared input. Clustering requires that group output be greater than individual input; this is the principle of synergy. In terms of learning, it may mean a greater return for the time and energy invested.

Problems and Topics
Clustering handles problems and topics in much the same way as it handles questions, but time requirements may be harder to predict. The breakdown of clusters into fruitless 'rap' sessions is a hazard, particularly when perennial problems are under study. The teacher must know when to intervene to ensure productivity. He must help the students to realize that understanding problems and seeing where difficulties lie is sometimes as important as finding solutions, and that the most productive approaches are those that go directly to the heart of an issue. Clusters can argue fruitlessly, for instance, on the essential themes of *King Lear* or whether *King Lear* is more of a tragedy than *Waiting for Godot*. There is obviously no 'right' answer; all the student can do is support his position as strongly as possible. The important thing is to adopt the line of discussion that reveals the most about the subject.

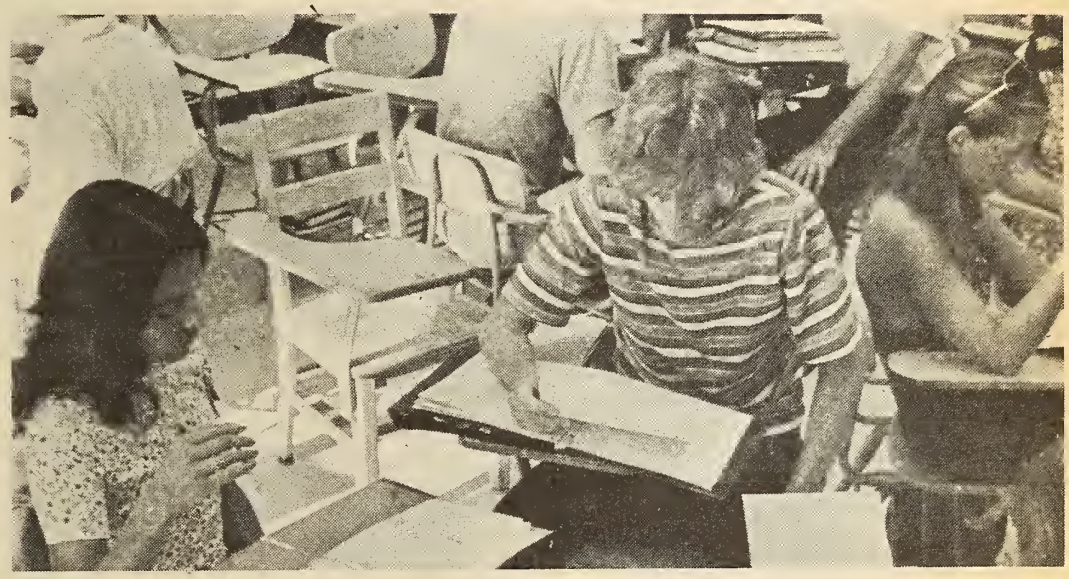
If the teacher feels that a cluster topic merits the attention of the whole class but time is at a premium, he may discuss it in a written memorandum to the class. If students introduce topics tangentially, it is the teacher's responsibility to see that they are not left hanging. He must, at all times, try to encourage the *building* of ideas; this is part of his function as collator, and his success in using clustering depends heavily on his ingenuity in this area.

Papers and Handouts
Handout material distributed by the teacher is an excellent source of cluster subjects. It may include special material that he has collected, outstanding student papers, or his own views of certain texts.

Student papers for class interchange should not be longer than three typewritten pages, and assignments should be given with this in mind. Longer papers take too much reading time and reduce opportunities for interchange. Every paper should circulate as much as possible; students like to know the views of their peers, and through a formal classroom exchange their thinking becomes part of the subject matter. Students relate better to the learning situation when more of their peer group is involved, and sometimes they are much more effective than the teacher in teaching each other.

Evaluation and Grading
After the student interchange the teacher collects the papers and goes through his normal marking procedures. By adopting a synergetic approach he could also involve the students in these procedures and acquaint them with the evaluation process. In the Santa Barbara City College experiment this was done by having two classes exchange papers and use them as cluster subjects. Surprisingly, perhaps, while some papers were given as many as seven different individual gradings, on the whole the cluster grades were very close to those given by the teacher. This is not explained by the fact that a grading scale was available for class reference, for only a few students used it. The students enjoyed grading the papers of their peers and responded well to queries concerning their use of the various gradings – 'What was excellent?' 'What, specifically, was poor?' The papers provided a particularly productive cluster experience. Through it the students gained insight into the whole problem of grading and evaluation as well as an awareness of how criteria of evaluation can be applied to various kinds of written material. They also acquired some understanding of the teacher's problems and were more circumspect in subsequent evaluations of both class and teacher.

In their evaluation of the class a sizable majority of the students were enthusiastic about clustering as a teaching method, although they criticized some of its features. The comments of Dr. Fred Schuler, a colleague who came to class over the entire semester, included the following:



'My observations were consistent with many of the comments of students on evaluation of clustering. But I believe there are other subtle things going on, in terms of group dynamics. As an example, the "collators" (i.e., cluster spokesmen), who were chosen at an early stage of the cluster discussion, uniformly made an excellent presentation, better than the information and opinions given to them. That is to say, the "collators" took a very active and responsible role of editing, adding, revising, and organizing the discussion in order to make a consensus report to the class and to Mr. Lane.

'With the addition of clustering to more conventional classroom presentation, the class was presented with:
1. a highly structured course (even though it may not have appeared so on the surface),
2. other students as resources,
3. the needs of students,
4. the instructor as a resource,
5. clustering as a learning mechanism,
6. examples of the work of other students,
7. the task of self-evaluation,
8. the task of the evaluation of the work of others,
9. the process of synergism.'

Guidelines for Successful Clustering
The guidelines listed below are based on student comments, Dr. Schuler's remarks, and personal observations of what did and did not work. They are, of course, subject to modifications to suit other disciplines and other teachers.

For students:
1. Come to class prepared. Be 'filled' with the topic proposed for your cluster.
2. Serve as a contributing member, balancing input and output by neither remaining silent nor hogging the whole show.
3. Keep the cluster's perspective; don't go off on too many tangents.
4. Work with one cluster long enough to relate to and become familiar with its members.
5. As opportunities arise, move into other cluster combinations in order to interact with new people and learn other approaches.
6. Listen to what is said as if you were cluster spokesman.
7. If it helps, take notes of the salient features of the discussion and the points that are made.
8. Do not be embarrassed by lags in cluster discussion; private musing is sometimes needed. If non-working silence predominates, try to stimulate discussion by asking pertinent questions.
9. Give attention, and contribute if possible, to the collating session that follows the class session. Remember that a cluster spokesman is really a collator.

For the teacher:
1. Clustering works best when centered around specific topics, questions, and problems. Relate the cluster session to the overall purpose of the topic of inquiry.
2. Clusters should never include more than eight persons. Clusters of three are best for a paper exchange.
3. Encourage clusters to get to the heart of the matter by exchanging essentials promptly.
4. Clustering has a purpose: synergism. Keep it in mind.

Conclusion
In the clustering arrangement, the student feels freer; he is autonomous, yet cooperatively associated, and more constantly involved and active. He activates and extends his own and his peers' learning within the synergetic atmosphere.

Clustering as a learning procedure is non-authoritarian but not without authority. Authority, like meaning, gradually emerges and is gained by consistent work and perseverance. Each person in a cluster is responsible for mastering and communicating his own share of each inquiry. Each member is an instructor; he gets to know the other members of his cluster and class more thoroughly and more quickly through contact, circulation, and interchange. All members experience the cooperative sharing of ideas and identities and the learning situation becomes more complete, more productive, more flexible, and more enjoyable.

Clustering enables the teacher to do more with less, and improves and extends instructional technique and learning capability in the classroom. Not all teachers can use all of the procedures suggested, but all of them can profitably adapt some part for use in their own discipline and according to their own predilections. In so doing, they can modify some of their unrewarding and unshared labors through exchanging a separatist and authoritarian teaching role and environment for a cooperative, synergetic, and egalitarian one.

Un siècle du développement de l'enseignement au Québec et en Ontario

Deuxième partie: Les mesures du rendement

Cette étude, comme nous l'avons déjà souligné dans un premier article, vise à vérifier l'hypothèse, selon laquelle le système d'enseignement de l'Ontario aurait connu un rythme de développement plus accéléré que celui du Québec. Pour atteindre cet objectif, nous nous sommes appuyés sur trois critères d'évaluation et sur des mesures du rendement.

Les deux premiers critères d'évaluation faisaient l'objet de l'article précédent. On y démontrait que d'une part, le niveau de qualification des maîtres des écoles publiques était plus élevé en Ontario qu'au Québec et que d'autre part, l'appui financier des divers gouvernements à cet enseignement était plus généreux en Ontario qu'au Québec.

Notre troisième critère d'évaluation est l'appui financier accordé par les divers paliers de gouvernement aux universités, au cours de la période qui s'étend de 1931 à 1971. Les chiffres dont nous disposons font apparaître que l'écart entre l'Ontario et le Québec s'élargit de façon très sensible, de décennie en décennie. Ainsi en 1931, l'écart qui favorisait l'Ontario était de $3,183,041; en 1941, cet écart était de $2,373,954; en 1951, il grimpait à $4,462,453 pour atteindre en 1961 $26,640,000; en 1971, l'écart subissait un nouveau bond pour toucher les $441,458,000.

Ce qui ressort de l'analyse de nos trois critères d'évaluation, est l'incontestable supériorité du système d'enseignement ontarien, lorsque l'on fait référence au pourcentage des maîtres en exercice, qualifiés, et au total des subventions accordées par les divers gouvernements, aux écoles publiques et aux universités.

Les Mesures du Rendement
Le rendement est ici mesuré par le taux des effectifs de chacun des deux systèmes d'enseignement. On obtient ce taux, par la comparaison du nombre total de jeunes, âgés de 5 à 18 ans, avec ceux qui fréquentent les écoles élémentaires et secondaires publiques et par la comparaison du nombre total d'adolescents, dont l'âge varie entre 19 et 24 ans, avec ceux qui fréquentent à plein temps les universités.

Tableau 1

Le pourcentage des effectifs scolaires des écoles élémentaires et secondaires publiques du Québec et de l'Ontario par rapport à la population totale d'âge scolaire au cours des années comprises entre 1881 et 1961

	1881	1891	1901	1911	1921	1931	1941	1951	1961
Ontario	74.3	75.8	76.3	77.4	80.7	85.0	71.6	78.7	85.5
Québec	49.7	53.5	58.4	60.5	66.3	66.4	64.8	63.6	75.5
Ecart	24.6	22.3	17.9	16.9	14.4	18.6	6.8	15.1	10.0

Réf.: *Elementary and Secondary Education in Canada*, 1936–38, D.B.S., Education Division, p. 15.
Réf.: *Survey of Elementary and Secondary Education*, 1958–59, D.B.S., Education Division, Table 13, plus p. 38–49.

Tableau 2

Le pourcentage des étudiants à plein temps du Québec et de l'Ontario selon le niveau d'études et par rapport à l'ensemble de la population comprise entre 19 et 24 ans au cours des années qui s'étendent entre 1921 et 1961

	1921	1931	1941	1951	1961
1er cycle					
Ontario	3.2	3.2	2.9	5.0	6.3
Québec	2.8	2.7	2.9	4.8	7.8
2e, 3e cycle					
Ontario	0.0	0.1	0.1	0.4	0.7
Québec	0.0	0.1	0.1	0.3	0.6
1er, 2e, 3e cycle					
Ontario	3.1	3.4	3.1	5.5	7.0
Québec	2.9	2.9	3.0	5.2	8.5

Réf.: *Survey of Higher Education*, 1961–62, D.B.S., Education Division, p. 30–31.

Parce que la modèle d'analyse que nous avons adopté, implique une relation de cause à effet, nous pouvons dès lors prédire, connaissant le résultat de l'analyse des trois critères d'évaluation, les résultats des mesures du rendement: le pourcentage des enfants qui sont inscrits à plein temps dans les écoles élémentaires et secondaires publiques de l'Ontario sera plus élevé que celui du Québec; de plus, le pourcentage des étudiants qui sont inscrits à plein temps, dans une université ontarienne sera aussi supérieur à celui du Québec.

Les effectifs scolaires des écoles élémentaires et secondaires publiques
Ce premier tableau nous montre que l'Ontario a su au cours de chacune de ces années, attirer et retenir à l'école un nombre plus grand de ses jeunes. La différence du taux des effectifs est particulièrement importante au tournant de ce siècle où sont enregistrés des écarts qui varient entre 17 et 25%. Il est intéressant de noter que le taux de croissance du Québec qui fut de 16.6% entre les années 1881 (49.7%) et 1921 (66.3%) est supérieur à celui de l'Ontario, qui s'élevait à 6.4%, au cours de la même période. La différence des taux de croissance est donc de 10.2% (16.6% —6.4%) en faveur du Québec. Cette accélération du taux de croissance de la scolarisation au Québec peut s'expliquer par l'intensification des efforts en vue de combler la marge qui séparait le Québec de l'Ontario.

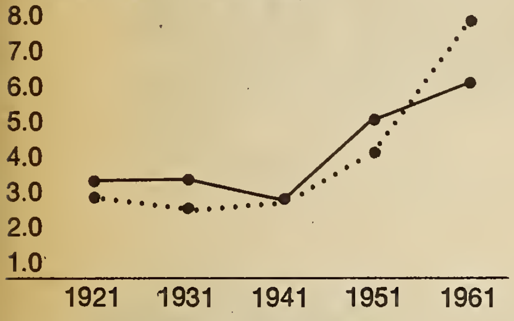
Malgré tous ces efforts, le taux de scolarisation pour les niveaux élémentaire et secondaire a toujours été plus élevé en Ontario qu'au Québec. Les causes en sont multiples; elles sont à la fois de nature politique, philosophique, économique et démographique. Des pressions ont toujours été exercées sur le système d'enseignement québecois de telle sorte que l'évolution du système ainsi que son fonctionnement en ont été entravés.

Jocelyn Desroches,
Département de sociologie, OISE

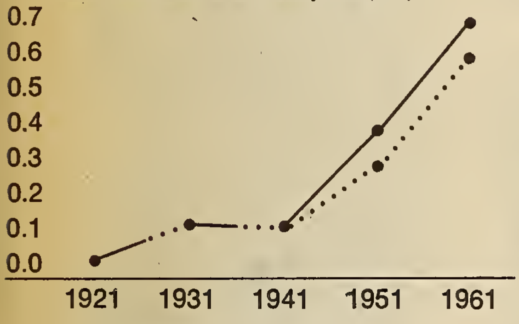
Tableau 3

La courbe du pourcentage des étudiants à plein temps du Québec et de l'Ontario, selon le niveau d'études et par rapport à l'ensemble de la population comprise entre 19 et 24 ans au cours des années qui s'étendent entre 1921 et 1961

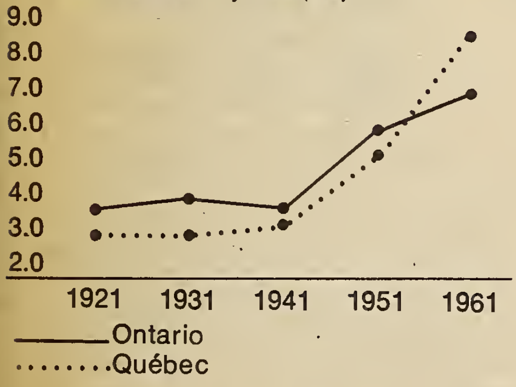
A. Effectifs du 1er cycle (%)



B. Effectifs des 2e et 3e cycle (%)



C. Effectifs des 3 cycles (%)



Les effectifs scolaires des institutions post-secondaires
Pour étaler plus clairement les données relatives aux effectifs scolaires des universités, nous les avons distribuées en trois sections différentes; la première section représente les données relatives aux étudiants du premier cycle, la seconde section, les étudiants du deuxième et du troisième cycle et la troisième section, l'ensemble des étudiants des trois cycles.

La principale caractéristique qui se dégage du deuxième tableau est l'accroissement constant du taux des effectifs dans les universités du Québec et de l'Ontario. Le tableau 3C nous montre qu'entre les années 1921 et 1941 les effectifs des deux provinces se sont stabilisés et que l'Ontario a toujours maintenu une légère avance sur le Québec. Mais les deux dernières décennies voient apparaître un redressement assez remarquable; on passe de 3.1% à 7% pour l'Ontario et de 3% à 8.5% pour le Québec. Nous pouvons tenter d'expliquer ce redressement des deux premières décennies de l'après-guerre, par la nécessité d'acquérir des compétences nouvelles exigées par le renouveau technologique et aussi par la reconnaissance, par les états, du principe de la rentabilité à court et à long terme, des investissements effectués dans le système d'enseignement.

Ce taux de croissance est plus marqué au Québec qu'en Ontario, et ce malgré des investissements de l'état ontarien plus considérable; l'Ontario avait en effet investi $4 millions de plus que le Québec en 1951, et $26 millions en 1961. Malgré des investissements moins imposants, le taux des effectifs, pour l'ensemble des trois cycles, des universités du Québec dépasse donc en 1961, de 1.5% celui de l'Ontario.

En 1973, Statistique Canada nous indique que cette tendance, au lieu de se stabiliser ou de s'estomper, s'est accentuée; ainsi, selon les données de *L'Education au Canada*, le taux de croissance du Québec est passé de 8.3% en 1962–1963 à 10.2% en 1965–1966 alors qu'il atteignait 11.7% en 1968–1969; à la même époque, le taux de croissance de l'Ontario est passé de 7% à 8.9% pour finalement atteindre 11.4% (p. 403). Parallèlement, les investissements de l'état ontarien étaient supérieurs de $85 millions en 1965 et en 1969, à un peu plus de $306 millions (p. 462).

Comment peut-on expliquer cet afflux d'étudiants québecois vers les études universitaires? Il ne fait aucun doute que l'assouplissement des politiques d'admission, amorcé vers les années '50, a permis à bon nombre de diplômés des écoles publiques d'accéder aux études universitaires; de plus la création des CEGEP a ouvert toute grandes les portes de l'université qui étaient auparavant limitées aux seuls détenteurs d'un diplôme des collèges classiques. La mise sur pied, par le gouvernement, d'un nouveau système de prêts et de bourses a aussi facilité l'entrée à l'université de milliers de jeunes qui en auraient été autrement exclus. Il y avait de plus un climat général d'engouement pour l'éducation qui fut accompagné d'un renouveau politique favorable à un plus grand libéralisme intellectuel et social.

Les tableaux 2 et 3 nous montrent que c'est essentiellement au niveau des études du premier cycle que les effectifs du Québec dépassent, en 1961, ceux de l'Ontario. Il est à noter que cette tendance se poursuit tout au long des années '60; l'Ontario, cependant, a un nombre plus élevé de ses adolescents qui sont inscrits dans des études du deuxième et du troisième cycle. (Voir: *L'Education au Canada*, p. 403.)

Que les subventions de l'Ontario dépasse amplement celles du Québec au niveau des universités peut en partie s'expliquer par le fait que l'Ontario a, depuis 1941, selon notre tableau 3B, un plus grand nombre d'étudiants au niveau des deuxième et troisième cycles; on sait que les investissements à ces niveaux sont de beaucoup plus considérables: le coût de formation des étudiants et des professeurs est plus élevé, les subventions à la recherche plus nombreuses.

Conclusion
Cette étude montre qu'en Ontario, la croissance du système d'enseignement a été plus continue qu'au Québec. Pour rattraper l'Ontario, le Québec a dû connaître des périodes de redressement. Le gouvernement de la 'révolution tranquille' a proposé aux Québecois la démocratisation de l'enseignement; cet objectif a été atteint dans la mesure où l'on considérait l'Ontario comme un modèle à atteindre.

Dans un proche avenir, nous croyons que le taux des effectifs des deux provinces est appelé à se stabiliser; l'incertitude du climat économique aidant, les gouvernements vont restreindre leurs subventions à l'enseignement.

Teaching the Cambridge School Classics Project Foundation Course

Troy and the Early Greeks

Two wine cups from Mycenaean Greece

The Lion Gateway of the palace of Mycenae

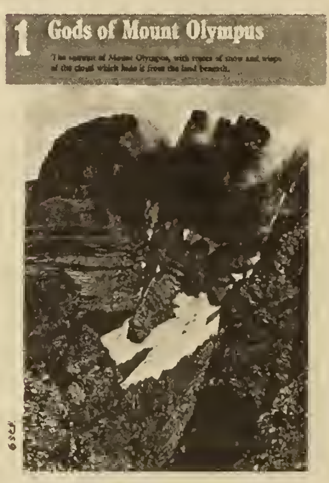
9 Troy and the Early Greeks

The megaron or main room of the palace at Pylos as it may once have been

Gods of Mount Olympus

A marble statue of the goddess Athene

A red-figure vase showing Demeter with her daughter, Persephone



The summit of Mount Olympus

A vase painting showing Apollo and Artemis killing the children of Niobe

Troy and the Early Greeks
Gods of Mount Olympus
These first two folders from the Cambridge School Classics Project's *Foundation Course*, together with the *Teacher's Handbook*, were published by Cambridge University Press in October 1972. The other three folders became available during 1973.

Each work card within the folders provides an opportunity for the child to explore one aspect of the Greek world. An attempt to provide work cards graded in terms of complexity was rejected by schools. Instead a mixture of straightforward and more difficult tasks is suggested on each double-sided work card. The work cards illustrate the way in which the pupil is helped to study certain concepts by drawing upon surviving evidence.

The author of this article is Foundation Course Director of the Classics Project and is Senior Lecturer at St. Matthias College of Education, Bristol, U.K. The article, which we believe will be of interest to many Canadian teachers, is reprinted from the Spring 1973 issue of the U.K. Schools Council publication *Dialogue*.

The Cambridge School Classics Project Foundation Course is presented entirely in English for students of all abilities in the 11–13 age range. The Project has also produced a four-year Latin course designed to teach pupils to read Latin more fluently, and to enable them to develop an understanding of Roman civilization and its values. The Latin course is described in the same issue of *Dialogue*.

Martin Forrest

In recent years many secondary schools have been placing an increasing emphasis upon a common curriculum for all pupils in the 11–13 age range. Classical languages, along with other linguistic studies, with the exception of French, have become specialist subjects reserved for a linguistically gifted minority at the age of 13 or after. As a result there has been a strong desire in schools, by no means expressed by classics specialists alone, that the world of classical Greece and Rome should play some part in the process of general education in the middle years of schooling, especially in the 11–13 age range, and a feeling that the classical world has much to offer to all pupils, whether or not they are likely to specialize in classics at a later stage.

Why classical studies?

There are three main ways in which classical studies can make an important contribution to general education. First, the Greco-Roman world forms one of the main foundations of European literature, thought, art, and architecture. Our literary and artistic traditions are based to a very considerable degree upon classical sources, and Greek myth and legend in particular have stirred the imagination of sculptors and painters, poets and playwrights, filmmakers and composers in the past and will continue to do so in spite of the manifold sources of inspiration which are now available to them from every part of the world.

Secondly, a deeper understanding of our own society cannot be obtained by studying it in isolation from other societies both past and contemporary, for other societies are able to provide both comparison and contrast with our own.

Thirdly, in the curriculum content of pupils in their middle years there will be much that continues the process of general education already under way in the primary school: the acquisition of basic skills, conceptual development, development of the imagination, and the growth of personality. The classical world, especially in its myth and legend, provides a rich store of material for the teacher to draw on in furthering these aims – material that readily spills over into other areas of the curriculum that have by tradition been timetabled separately: art, dance, craft, drama, creative writing, music, and history.

The 'Mediterranean Patch'

During the past six years, schools of differing types throughout the British Isles have introduced courses in classical studies for their pupils in the 11–13 age range. These courses are sometimes based upon Rome but even more commonly the stage is set in ancient Greece, with stories providing the backbone of the course: *The Iliad, The Odyssey*, the exploits of the Greek heroes, the ancient concepts of the Underworld, and the Olympian hierarchy.

In some schools, emphasis is upon the creative development of these stories, and sometimes the timetable permits collaboration between teachers of classics, art, drama, dance, and other subjects. In others, the society that produced the stories is stressed with much concentration upon the pupils' own exploration of that society, and the course is seen as a 'Mediterranean patch' within a more widely ranging humanities course.

In considering the relevance of classical studies in the contemporary school curriculum, particularly for the below average child, it is probably the universality of the stories which has the greatest impact. During the Cambridge School Classics Project's experimental work in schools, the most positive reaction has often come from the 'less academic' pupil with little experience of books or reading at home and to whom the wanderings of Odysseus, the siege of Troy, and Theseus and the Minotaur have an immediacy of appeal. The subject matter of the stories is often quite new, but the human situations are directly meaningful. The limited evaluation study carried out for the project seems to confirm this verdict. At one mixed comprehensive school, Westwood High School, Leek, remedial classes have benefited greatly from their involvement in classical studies. The output of children's work, their tape-recorded dramatization of stories, collages, friezes, and other art work together with their teachers' comments suggest that the course is fulfilling an important need in the lives of the pupils. The children's enthusiasm has often been echoed in the reactions of parents in schools where classical studies have been featured at parents' meetings.

Classroom film-making

Many schools have used contemporary media as a means of re-creating classical material – cartoon strips, radio and TV programs, and tabloid newspapers. More than one school has produced a film. At St. Michael's School, Stevenage, a boys' comprehensive, a team of teachers, including specialists in classics, art, drama, and music, decided to make a film for several years running. Each year a different Greek epic such as *The Voyage of the Argonauts* was chosen. The whole venture was a team effort involving all of the more than one hundred pupils in their first year at the school. The children used material presented to them by their classics teacher to re-create the stories scene by scene. They carried out research using project materials to find out about costume, arms, and armor, places and the landscape, and then set to work to make costumes, properties, sets, models, and drawings for use during the filming. The film was made partly on location in the school neighborhood and partly inside the school using artificially created scenes of city walls, mountainous terrain, and the sea. The film was shot entirely by the boys themselves and at a later stage a soundtrack of improvised music was added. The action was seen as providing opportunities not for individual stardom but for all of the children to work collectively to a common end. The scenes involved all pupils equally and no one boy was singled out to play a 'leading role.' The same cooperation involving a diversity of skills was built into the preparatory work.

Most teachers are likely to be content with less ambitious activities than film-making, but group activity plays an important part in the follow-up work of the majority of schools. It was with this in mind that the project prepared sets of resource material. The pupils' work cards, which now come in the form of master stencils, have undergone extensive changes as the result of school trials.

Experience has confirmed that pupils in the 11–13 age range derive great enjoyment from a study of the classical world. Moreover, there is a great deal that can appeal directly to pupils of all abilities and that can lead to a variety of responses. Classics is no longer the preserve of the abler child but is contributing to the curriculum more broadly than before.

Confluent Education: Strategies and Limitations

'When the teacher looks over my shoulder, she makes me nervous.'

'This school is too noisy.'

'The teacher gives us too much homework.'

'Nobody at school really cares about me.'

'The teacher isn't fair when he grades my work.'

These comments came from children in a public school in Thunder Bay engaged in an activity called Complain, Gripe, and Moan. No, the complaints were not registered by the kids to each other at recess but were actively solicited by the teacher in the classroom. In this activity each child has the opportunity to air his concern about something that is troubling him at school, at home, or in his neighborhood. The activity was devised by Weinstein and Fantini (1970) and is part of what they refer to as 'a curriculum of affect.' The strategy and others like it are also part of a larger movement in education that attempts to deal directly with a student's feelings as well as with his intellectual development. This movement has been referred to by a number of names, including humanistic education, psychological education, affective education, and confluent education. For consistency's sake, confluent education will be used in this article.

In brief, confluent education has been defined as 'the integration or flowing together of the affective and cognitive elements in individual and group learning' (Brown, 1971, p. 3). It arose during the late 1960s because there was the concern that curriculum reform was concentrating solely on cognitive skills. The emphasis on new math, accelerated reading programs, and subject-matter 'structure' are some examples of curriculum priorities that confluent educators felt needed reexamining in terms of a more complete and integrated view of the developing child. Confluent educators have argued that teachers cannot focus solely on the student's cognitive processes since his emotional state is intimately linked with those processes. It has also been asserted that attempts to ignore or overlook the student's emotional needs have contributed to student alienation.

The aim of confluent education is the development of identity – a sense of integration within oneself as well as a sense of relatedness to the immediate community. Finding identity is finding out what you ultimately value and how you are able to live in a manner that reveals those values. William James, the American psychologist, wrote a statement that is expressive of an authentic sense of identity:

'A man's character is discernible in the mental or moral attitude in which, when it came upon him, he felt himself most deeply and intensely active and alive. At such moments there is a voice inside which speaks and says: "This is the real me!"

'Such experience always includes . . . an element of active tension, of holding my own, as it were, and trusting outward things to perform their part so as to make it a full harmony, but without any guaranty that they will. Make it a guaranty . . .

John P. Miller,
OISE Northwestern Centre,
Thunder Bay

> *and the attitude immediately becomes to my consciousness stagnant and stingless. Take away the guaranty, and I feel a sort of deep enthusiastic bliss, of bitter willingness to do and suffer anything . . . and which, although it is a mere mood or emotion to which I can give no form in words, authenticates itself to me as the deepest principle of all active and theoretic determination which I possess. . . .' (Quoted in Erikson, 1968, p. 19)*

In sum, the aim of confluent education is to put the student in touch with himself so that he can direct and guide his own behavior without constant reference to the expectations of others.

Teaching Strategies in Confluent Education

How does the teacher attempt to facilitate identity? In brief, there are four basic areas of concern within the classroom.

The first includes the teacher's attempt to deal with the whole child. This means that the teacher tries to be aware of all needs of the student – cognitive, emotional, and physical – and structure his teaching around that awareness. For example, before initiating a discussion of controversial issues in social studies, the teacher might guide his students through some yoga exercises to relax them. The teacher is aware that the physical and emotional state of the students can affect the discussion as much as their knowledge of the issues involved. An extremely tense student, for example, will not be able to enter effectively into the discussion unless he is relatively relaxed and in control of himself.

The activity mentioned earlier, Complain, Gripe, and Moan, is a strategy devised to evoke student feelings. In general the aim is to give both teacher and student a deeper awareness of student feelings so that the teacher can effectively deal with them in the classroom. Although not all problems can be solved, some complaints can lead to change in the behavior of the teacher or student that is more conducive to learning. For example, the child who gets nervous when the teacher looks over his shoulder has made his feelings known; the teacher can then reexamine this particular habit and either avoid looking over the child's shoulder or at least show tact when she must do so. In general the strategy can be a first step toward opening the classroom with regard to student feelings.

A second area of focus in confluent education is experiential education. In short, the teacher attempts to build environments where the student can experience a problem imaginatively as well as analyze it. For example, one teacher had the class consider how they would survive if they were isolated on a primitive island. This led to a discussion of survival issues – how they might cooperate, the possible leadership arrangement, and alternative procedures for settling conflicts and disputes. The teacher then assigned Golding's novel *Lord of the Flies*, which is developed from a similar situation. Discussion and analysis of the novel in the class then occurred within a common experiential context (Brown, 1971, pp. 61-64).

Simulation games also can bring the experiential element into the classroom. By reenacting various situations – for example, labor–management bargaining, international diplomacy, city council confrontations, the generation gap, and career planning – the student experiences some of the impinging contingencies. The research evidence on the effects of simulation is incomplete, but the data do indicate that simulation leads to heightened student involvement. It is important that the teacher attempt to integrate the experiential element with the analytical and conceptual framework of the curriculum. Student experience can take on more meaning when connections are made through reflection and analysis.

Another strategy devised by a teacher indicates how role playing can be used with a film for maximum effect. Here the students were assigned roles needed to dramatize the issuing of an order by a general to hang a traitor and the passage of the order through the ranks to the executioner. The students who played the officers at the upper chain of command were in a different room and did not actually witness the dramatization of the execution. The students were then shown *Occurrence at Owl Creek Bridge*, a powerful film that portrays a situation similar to the one just enacted. The film could bring the students' feelings into direct contact with the human consequences of a remotely taken decision. After the film the students again enacted the events and compared their feelings with their first dramatization. Such an experience can give the students insight into the dilemma of duty versus individual conscience (Lyon, 1971, pp. 84-86).

The third area of emphasis within confluent education involves the individual's capacity for fantasy and alternative modes of consciousness. The techniques of psychosynthesis, for example, attempt to use the student's imagination and mental imagery to facilitate personality integration. Psychosynthesis is a psychological and educational approach that attempts to recognize and integrate the conflicting elements within human consciousness. The Canadian Institute of Psychosynthesis is currently developing a number of techniques, which are being used in secondary schools and community colleges in Montreal. One of the techniques employed in psychosynthesis simply involves meditation on the question 'Who am I?' This technique is designed to facilitate self-awareness and the development of identity. In the hands of a skillful teacher it can also lead a troubled student to a more positive self-image.

Weinstein has also developed a number of strategies to explore what he calls the Geography of the Self. Basically this unit attempts to increase self-awareness through fantasy. For example, some of the exercises include:
Where are the boundaries of the body?
If your body were a country, where would you live or not live?
What are the climates? Seasons?
What parts of the body are slippery?
What are the capitals of the self and why?
What are the major products?
What are the differences between the surface and beneath it?
What are your wars and conflicts (cold and hot)?
Where are the colonies? Who owns parts of you?
Where are the tension (trouble) spots?
What about the 'iron curtain' and how it emerged?
Where would you rest or play?
When are you most at sea level?

What do you use to make a living?
Where are the uncharted regions – the frontiers?
How and who will explore these?
What are the seasons of your life?
(Lyon, 1971, p. 143)

The Geography of the Self attempts to facilitate an understanding of the relationship between the individual's image of himself and his physical body. These exercises can let the person begin to 'listen' to his body. Some confluent educators argue that the body does not lie but relays its own form of feedback. The headache or the blush, for instance, is a form of feedback that indicates the state of being of the whole individual, emotional as well as physical. The person who listens to his body can thus bring himself to a better understanding of his feelings. Weinstein's Geography of the Self can be a first step towards that listening process.

The final thrust within confluent education is the quest for community. This involves teacher awareness of processes that facilitate meaningful interpersonal relationships in the classroom. Carl Rogers in particular has mentioned qualities in teachers that are generally facilitative of healthy human relations. In brief, these include realness, regard, and empathy. Realness is the capacity to be in tune with or congruent with one's own feelings and concerns. It means not putting on a facade but accepting feelings and dealing with them at a conscious level. The behavior of one teacher is an example of this. She made art materials available to the students for creative work but the chaos of the room bothered her:

'I find it maddening to live with the mess – with a capital M! No one seems to care except me. Finally, one day I told the children . . . that I am a neat, orderly person by nature and that the mess was driving me to distraction. Did they have a solution? It was suggested there were some volunteers who could clean up. . . . I said it didn't seem fair to me to have the same people clean up all the time for others – but it would solve it for me. "Well, some people like to clean up", they replied. So that's the way it is.' (Quoted in Rogers, 1969, p. 108)

Regard concerns the teacher's ability to convey respect for the individual student and his potential for growth. It also involves the teacher's respect for the student's right to make decisions affecting his growth. Regard does not involve relinquishing authority but means that the teacher conveys his sense of respect of the student's concerns, feelings, and values.

Finally, empathy involves the teacher's ability to understand student perceptions and to convey to the student that understanding. In short, it means trying to put oneself in the student's shoes. The work of Piaget and Erikson (See *Orbit* 14, 15, and 18) indicates that children view the world much differently from adults and if the teacher is not aware of the child's perspective the child's growth may be thwarted.

In general, research studies have supported the notion that teacher realness, respect, and empathy are positively related to student development. This seems to hold true for emotional development as well as development in such areas as reading achievement.

The quest for community has also led to sensitivity training in secondary schools. Some teachers are able to facilitate deep and meaningful encounters between students and themselves. In these sessions there is a sharing of student concerns that often helps student growth. However, sensitivity training is a difficult method to develop in the schools because there are very few teachers with the background and skills to be effective group leaders. If sensitivity training is included in the program it should be on an optional basis only and there should be no pressure for students to take part.

Limitations

Not only does sensitivity training have limitations in the classroom but confluent education as a general thrust can be misinterpreted and misused. For example, it can lead to some teachers' using the techniques as mere games. Some of the techniques and strategies of confluent education can be gimmicky if approached in this manner and can lose their intended value.

Other techniques can also be powerful and require caution. The teacher must have a firm sense of his own identity if he is to engage in confluent education. If he attempts to act out some of his own problems there will only be confusion and excessive anxiety. Even the teacher with a coherent sense of identity should start with strategies that are comfortable for him so that he can eventually move toward a wider variety of approaches.

Another problem with confluent education is that there is the possibility for the development of anti-intellectualism. Some of the strategies dealing with emotions and fantasy can lead to a sort of emotional self-indulgence. If the experiences are not related and integrated with the analytical elements of the curriculum the potential exists for excessive subjectivism and self-centeredness. Since adolescence in particular can often be a time of excessive self-consciousness, confluent education should also emphasize the importance of intellectual tasks and their relationship to the experiential aspects of the curriculum. The key to confluent education is integration. In order to facilitate the integrated self it is important that learning experiences in the school are not fragmented but related and integrated with one another so that connections and meanings are facilitated within the curriculum as well as within the student's consciousness.

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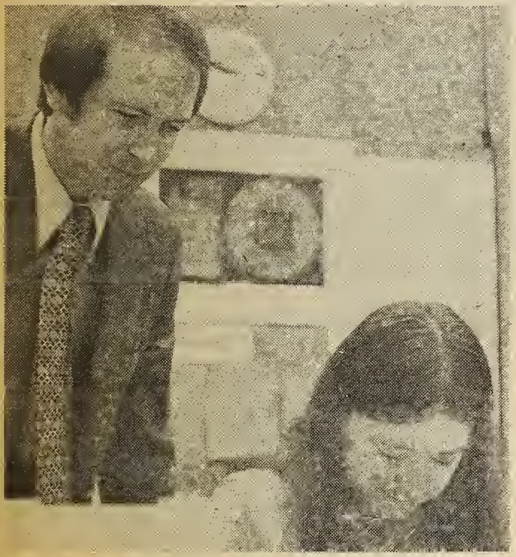
Semestering and the School Learning Environment

J. E. Davis, D. J. Ducharme, and J. A. Ross,
OISE Midwestern Centre, Kitchener



Semestering may give teachers additional time to provide individualized instruction.

As an innovation at the secondary school level, semestering has been surrounded by a considerable amount of rhetoric, much of it motivated by the altruistic goal of improving life in schools. At the same time, some of the rhetoric has used semestering as a grindstone on which to hone other controversial issues. This article is admittedly a contribution to the rhetoric but we hope that it has no axe to grind. Rather, its purpose is to examine some characteristics of an optimum learning environment and to speculate on the contribution semestering can make toward translating these characteristics into reality. To achieve its purpose the article examines five major principles of learning with special reference to the way in which the implementation of each would be facilitated by semestering.

Semestering

Although semestering exists in many forms, basically it is a device that reallocates the amount of time spent on a subject in any school term. In this article only full-credit semestering is discussed, and it is generally considered to mean a type of organization in which the school year is divided into two equal periods with a student taking one half of his year's credits in each period. To achieve this, the daily class periods are lengthened considerably, with the result that the number of classes a student attends and the number of students a teacher sees in a day are both approximately halved.

The Ideal School Learning Environment

Psychologists studying learning situations and learners have reached a high degree of consensus as to what conditions result in optimum learning. Following Johnson (1968) an effective learning situation is described thus:

1. The learner is actively engaged in the learning situation. This implies that the student is more than a passive receptor of knowledge and actually is engaging in activities beyond those usual patterns of sitting and standing that frequently characterize many classroom teaching situations.
2. There is provision for the purposes of the learner. Findings in psychology show that the interests of the student are crucial in determining the effectiveness of his learning. These interests vary among individuals and are also strongly related to their age levels. Only by building upon the interests of its learners can a school hope to develop student creativity and individuality.
3. Recognition is made of the individual's past experiences, attitudes, and values. Research has repeatedly demonstrated that the experiences a student brings to school are major determinants of his success in school.
4. The learner accepts major responsibility for his own learning. Short-term learning may often be accomplished through use of external motivation. More effective long-term learning occurs when the student is involved in setting his own goals.
5. The learner is permitted to work in a threat-free atmosphere. This principle calls attention to the importance of humane teacher–student relationships.

These characteristics of an effective learning situation are applicable to all teaching–learning environments; but semestered schools, through the nature of their organization, may facilitate the realization of these principles to a greater degree than more traditionally organized schools. However, one major premise should be kept in mind: the *effective* use of longer daily time blocks in a semestered organization is highly dependent upon the teacher's willing acceptance and implementation of the principles of learning outlined above.

The Active Participation of Students

The traditional organization of our secondary schools evolved from that of the grammar schools established in Ontario during the early part of the nineteenth century. At that time, the transmission of knowledge was seen as a prime purpose of schooling, and memorization was held in high esteem. In this context the student was looked upon primarily as a passive receiver of knowledge. Complementing this concept of the student was the manner of organizing both course content and the student's day. Content was neatly divided into small packages for daily presentation and drill. Thirty-five or forty minutes seemed appropriate for this type of lesson, and it also allowed the students to be exposed to the required eight courses per day.

In the decades following World War II several occurrences changed this picture. The knowledge explosion called into question the feasibility of transmitting any body of knowledge and the value of memorizing large amounts of content. In addition, educational thinkers looked with renewed interest at learning theories that called for active involvement of the learner. In this context, it seemed appropriate that students become active and judicious users of knowledge.

How did educators react to this new situation? Initially, the content of many courses was questioned and often revised. New courses were developed and students were allowed increasing degrees of freedom in choosing from among them. Simultaneously, a concern for using more varied classroom practices emerged. Still retained, however, was the quick succession of forty-minute periods in each school day.

Into this context was inserted the notion of the semestered class with its longer daily time block, which permits students to engage in several types of activities. Individual, small-group, and large-group work and visits to the school resource center, as well as combinations of these, all become increasingly possible within class time. Each of these activities encourages the student to participate more actively in his own learning and their purposeful combination may itself enhance motivation to learn.

The Purposes of the Learner

H.S.1 (1972/73) has given students a great deal of freedom to select courses in which they are interested, and so the student has option choice in both traditional and semestered schools. However, semestered programs extend the scope of this freedom by permitting students not only to choose areas of interest but also to select, under certain conditions, appropriate learning methodologies. Again this is directly related to the creative use of longer class periods, during which it is expected and hoped that teachers will allot time to assist students in selecting individual course goals. Recognition of the purposes of the learner, however, is essentially a feature of teacher attitude rather than of semestering. The latter simply facilitates the tasks inherent in that recognition.

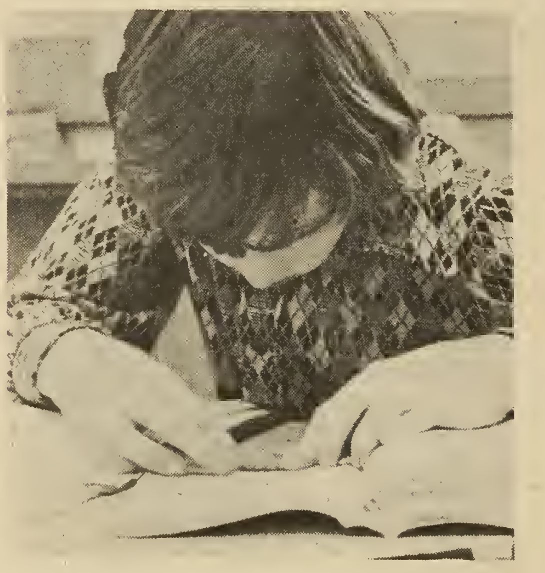
The Individual's Past Experiences

The purpose of all secondary schools is to facilitate 'the intellectual, social, physical and emotional growth of young people . . . by developing more fully the knowledge, skills and aptitudes that they bring with them to the secondary school' (Circular H.S.1, 1973/1974). Many teachers see the extended time blocks in semestered schools as facilitating this purpose. In traditionally organized schools the brief interaction of teachers with up to two hundred students per day in six classes of up to thirty-five is unlikely to be conducive to establishing the type of relationship within which teachers can come to know and understand the nature of those past experiences of a student that have special relevance to his secondary school education.

Student Responsibility for Learning

Since class period length in semestered schools is more conducive to the use of a variety of learning techniques, there will likely be more individualized programs in semestered schools. The individualized program places ultimate responsibility for learning upon the student and, in its best form, involves him deeply in setting his own goals and selecting appropriate learning strategies. This responsibility is not easily accepted by all students. Experience has shown, however, that proficiency in this area increases with practice in relevant goal-setting and with training in a variety of learning approaches. Again, the extent to which teachers come to know their students sufficiently well to determine and train this capability may be facilitated by the longer blocks of time allotted to each period.

Opportunities for students to follow their own interests may be increased by a change to semestering.



Semestering allows greater scope for the individualization of learning experiences.

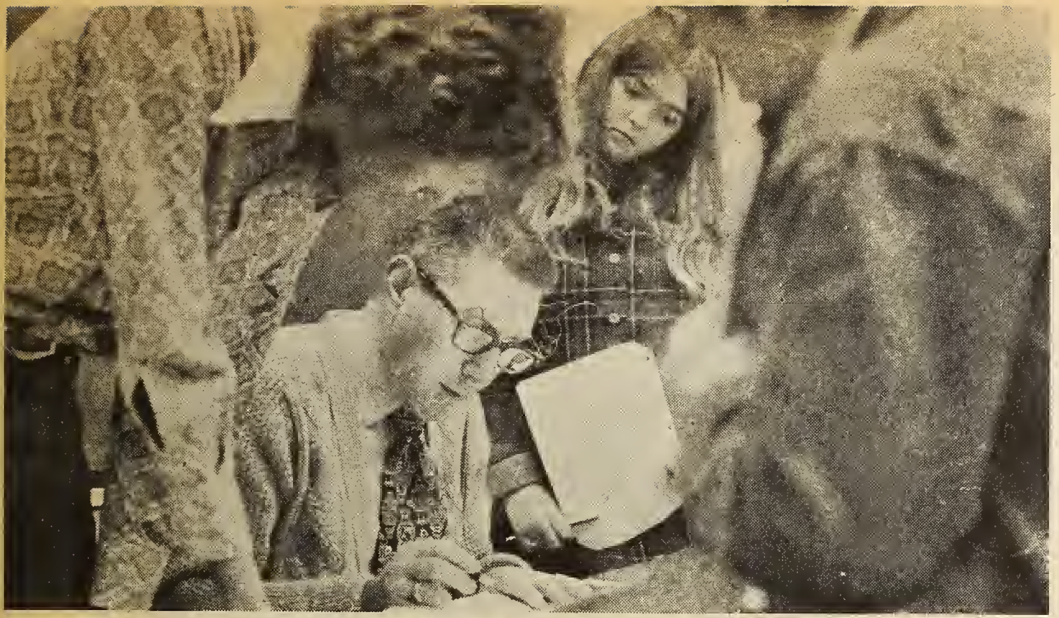
A Threat-free Atmosphere

Students may feel threatened in school by a variety of factors – tension, unsatisfactory personal relationships, courses with unrealistic goals, or inappropriate motivation. The last two may be mitigated to the extent that each student's program can be made truly individual. By decreasing the number of hurried class changes and by incorporating locker breaks, semestering may produce a relaxation of tension and contribute to a peacefully productive environment. It may also help mitigate student–teacher confrontations: during longer periods teachers tend to work to resolve potentially disruptive conflicts rather than avert or avoid them. Then, too, friction is diminished when there are a variety of learning methods, for student and teacher need not be in sustained interaction with each other. With students working cooperatively in groups, there can be in addition an atmosphere that promotes bonds of friendship.

Discussion

The time element in semestering is, of course, the crux of the matter. To begin with, the longer time block should enable teachers and students to get to know each other better. This understanding in itself is a powerful deterrent to student alienation and dropping out, which so often result from unsatisfactory teacher–student relationships. Furthermore, the longer classroom period makes certain kinds of learning objectives – such as in-depth analysis of particular course topics – relatively easier. That is to say, it has the potential for increasing a teacher's creativity and freeing him from techniques and objectives dictated by shorter periods of time.

However, semestered schools in which the freedom to innovate with respect to both objectives and teaching techniques has not been capitalized upon have reaped, instead of excitement, frustration and discontent on the part of students and staff alike, who find the sixty- to eighty-minute period too long for a sustained performance by any individual. The longer period must facilitate 'a variety of learning processes based on student inquiry and research, on individual and independent study, on group instruction, on small group interaction . . .' (H.S.1, 1973/1974). At the risk of over-repetition, let it be said that the secret to the use of the longer period lies with the teacher; even for the most dedicated professional, provision should be made for its effective use through appropriate in-service training.



Longer classroom periods encourage the development of closer personal relationships between students and staff.

Thus far, time has been discussed only with respect to the length of the class period. There is also a time factor to be considered in relation to the length of the semester. On the one hand, the shorter-term nature of goals in a five-month semester may be a motivating element for some students, and their experiences of success twice a year may heighten not only their intrinsic motivation but also their tolerance for any failure they may experience. On the other hand, it should be recognized that a shortened term cannot provide the same maturational benefits as the ten-month school year.

The time factor is also an important concern in relation to length of schooling. Semestering appears to be a very practical device for making the transfer between elementary and secondary school more flexible. It can permit secondary schools to accept students from effective continuous-progress elementary programs at at least one point in the school year other than September. It can also permit movement to postsecondary institutions at other than the traditional entry times, and thus reduce the 'hold' time for some students by several months. Students midway through secondary school might opt for travel, employment, or other learning experiences for several months and then rejoin a formal educational program without waiting a full school year. Such practices would recognize the increasing fluidity of attendance patterns as societal attitudes toward formal schooling fluctuate and would benefit students who acquire school credits at rates other than average. They are also in keeping with the flexible lifelong learning concepts endorsed by the Commission on Post-Secondary Education in Ontario in its report, *The Learning Society.*

The potential for individualizing student programs is both a strength of semestered organization and an area of concern. Even to begin to individualize a program increases a teacher's work load, since greater planning and more extensive preparation are called for. Recognition of individual student needs means allowing some students a great deal of freedom in directing their activities; it also may mean carefully organizing the activities of less responsible students. Planning for these organizational details can be both mentally and physically exhausting and almost always demands that teachers work together rather than in isolation as has been the pattern of the past.

For those teachers who are interested, semestering offers the opportunity not only for cooperative planning but also for cooperative teaching, and for extending their programs both into other areas of the school and into the community. In some schools, teachers of various disciplines have been able to combine their classes for a unit of integrated study. In other schools, the longer periods have permitted responsible students to integrate their school studies with learning activities such as work-experience programs and volunteer work in elementary schools or social service agency projects.

Proponents of semestering are quick to claim its many positive advantages. Semestering indeed may contribute to meeting more student needs than traditional programs, but only if the freedom from rigid time constraints is matched by a strong student-centered emphasis in the school program. Without this thrust the longer periods become only enlargements of standard procedures, and both teachers and students suffer from a prolonged exposure to a sustained task and to each other.

There are other possible concerns. Students and teachers may undergo additional strain at the mid-year semester break and experience new anxiety because of the change. Initially at least, the teachers' work load may become increasingly burdensome, and some may be unable to cope with the necessity of changed instructional techniques. There is also some evidence to show that the needs of students of lesser ability may not be met unless they are made the focus of special concern – evidence that only serves to reiterate the importance of a positive attitude toward both the students and the organization in semestered schools.

Conclusion

Full-credit semestering, with its fewer but longer class periods, has been greeted with a wide range of opinion, some of which has been negative and much of which has been positive. To properly judge its contribution to the present education scene, it must be assessed by what it can do to improve the learning environment in schools.

An effective semestered program makes high demands upon both teachers and students. Both will need assistance in accommodating to new perspectives in learning, to new methodologies, and to the development of new skills. In-service professional development for staff is a prerequisite if they are to face the necessity of changing their roles without a total loss of the security they must feel if the effective implementation of semestering is to be assured.

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Photos courtesy of Lord Elgin Secondary School, Burlington, Ontario

Gordon Bell School

A Mandate to Experiment

F. A. Hodgkinson,
Former Principal, Gordon Bell School

An inner-city high school in Winnipeg, Gordon Bell was named after an eminent physician who served for many years as Provincial Bacteriologist and as chairman of the Provincial Board of Health in Manitoba. The present enrollment is over thirteen hundred students in grades 7 through 12, and this includes an interesting cross-section of nationalities – Ugandans, Chinese, West Indians, Eskimos, and almost a hundred Canadian Indians. The school has generally enjoyed a reputation for progressive ideas and in 1968 received a special five-year mandate from the Department of Education to explore new teaching methods and curriculum approaches. The Gordon Bell Experiment, as this phase of the school's activities has come to be known, has led many other Manitoba high schools to adopt changes pioneered at Gordon Bell.

Although the experiment at Gordon Bell did not officially begin until September 1968, many courses were already being piloted for the Department of Education and actual changes in the teaching approach had been initiated some years earlier. In 1965/66, a couple of teaching teams were established for grade 8 social studies and for grade 9 mathematics, and the following year, as a result of numerous teacher requests, several teams were set up. Team teaching as understood by the experts probably differed from what was then attempted; nevertheless, many teachers gained valuable experience. Statements such as the following were included in the report from the various team members:

'All teachers expressed enthusiasm for the flexibility of team teaching.'

'Professionalization of teaching is accomplished through team teaching.'

'While the facilities were not always ideal, we found this method could succeed even in the traditional school, as long as there was parallel timetabling and library facilities were available. Teachers learn to use their ingenuity in the team teaching situation.'

'The students' reactions were checked through a questionnaire in which they did not identify themselves. About 83% indicated that they would like to be associated with a team next year.'

At first, of course, there were many difficulties. We could have used more periods for team planning. In one team we ran into the problem of incompatible teachers, and we suffered generally from limited facilities and lack of audio-visual material. The members of the various teams tried to model their efforts on the Trump plan but soon learned that the approach had to vary with the teachers and the subject. The large-group technique was overworked at first, but this dramatic break with the traditional classroom got the teachers out of ruts of long-standing comfort. Even if the whole approach were to prove wrong, we felt that at last the teachers were working together to find ways of enabling the students to learn.

As we moved to the next year, we expected that great strides would be made. In some areas we were sadly disappointed. However, we learned two important lessons: first, it is necessary to make haste slowly; second, leadership is all-important. Unless the department head believes firmly in the value of exploring team teaching, the teachers will inevitably run into difficulty.

The idea of the experiment was born in the spring of 1967. After a series of meetings between Department of Education, school, and school board people, the Deputy Minister of Education, the Superintendent of Secondary Schools, and the chairman of the Winnipeg School Board were informed that we were considering an experiment. Extensive discussion with the staff followed and the plan received enthusiastic approval. On June 30, 1967, a joint statement from the Department of Education and the Winnipeg School Board announced, 'A bold experiment in secondary education will be tried out in Winnipeg's Gordon Bell High School beginning in September 1968, when the entire system of promotion and teaching procedures are left to the school.'

We had a year in which to prepare for the experiment. Many meetings of staff were held both during the school day and in the evening, and our plans gradually took shape. A meeting for parents was held in January 1968 with representatives of the Department of Education and the Winnipeg board in attendance. After hearing a full explanation of the experiment and discussing it, the parents gave their approval. It was now time to involve the students, and their reaction was one of enthusiastic acceptance. Although provision was made for students to opt out and attend other schools, none did the first year and very few have done so since. Thirty-one students opted in from other schools in the first year and in 1971 a large number of applicants had to be turned away.

One of our objectives was to meet the needs and interests of each individual student – a dream, we knew, but worth dreaming. As a first step, we divided all students into three 'phases' for each subject according to ability, past achievement, and interest. This made it possible for a student to be in phase 1 (the top phase) in one subject and phase 3 (the bottom phase) in another. Also, the timetabling enabled students to move at any time from one phase to another. The teachers spent many long hours planning different subject matter and different approaches for the various phases.

Our next problem was student evaluation and reports. We devised a system whereby students were graded continuously not just on written tests but on the most pertinent aspects of their courses. For example, students taking French were tested on their oral ability, and students taking science were tested on their lab skills. Student attitude and

participation were graded. After experimenting with a number of reporting procedures, we adopted a system whereby each student was graded in each subject by a team of teachers and the rating on the report provided a record of progress throughout the year.

We felt that students should be given some unstructured time (I.S. periods) and some responsibility for their own education. If we were to meet individual needs, we had to make it possible for students to spend more time on some subjects than others. Then, too, we believed that if students were allowed to relax now and again their work would be better. After some experience, and now that all advantages and disadvantages are weighed, I am still very strongly in favor of some unstructured time. Almost all of the students were happier under this system and claimed that they used the time to advantage. We have worked hard at improving the use of the I.S. periods and I am convinced that this time, in which students are free to choose whether to work or not work and whether to do English or mathematics, is valuable.

What was probably our big breakthrough came with the addition to and changes in the building. All changes were made in consultation with the staff and the building now mirrors our philosophy. We have a good resource area for the library, and for each subject field we have a large area, a resource area, a teachers' planning room, and a number of classrooms. This design has enabled the teachers to provide the best learning situation for all subjects at all times. A word of caution, though – teachers and students need time to get used to a less formal situation, and unless the teachers believe in the value of the open area they would be better off in the old classrooms. For those who ask if innovative teaching can be carried on in the traditional setting, the answer is definitely yes. We would be doing most of the things that we are doing – not as well, though – even if our building had remained unchanged. The most important part of the whole experiment is the teachers' belief in it.

What about academic results? My feeling is that the most important educational outcomes can be measured only by subjective means; and with forty years' experience behind me, my subjective evaluation is that our students are receiving a better education than ever before. And I can draw on concrete evidence for support.

Let us look first at the brighter students. We have had students complete grade 7 mathematics by Christmas and move on to the grade 8 work. One student finished his grade 10 mathematics and went on to do grade 11 and grade 12 work in his tenth year. Frequently, grade 12 students at Gordon Bell take calculus at the University of Winnipeg. Students who have completed their grade 12 course in French sometimes work well beyond that level: one girl read French literature at the third-year university level while she was still enrolled at Gordon Bell. A student who completed his grade 12 physics in grade 11 took physics at the university during his twelfth year, and similar situations have arisen with regard to chemistry.

The average student too has benefited from the experiment. He has the opportunity to move to phase 1, and students who were interested have been challenged and helped to do this. Many of these students have performed beyond our expectations.

Some people may say that the experiment has allowed the slower student to 'goof off' and do poorer work than he would in a traditional setting. This is not so. The weaker students have been helped through work adjusted to their individual background knowledge and ability, through teaching methods adjusted to their needs and interests, and through attempts to arouse their interest and get them into the main stream. Their teachers have worked together in special planning periods to devise the best possible learning situations. Child guidance personnel, Children's Aid Society workers, and probation officers have placed a number of disturbed children in the school because they feel the open climate gives them a better opportunity.

Special education is often a problem, but we believe that students with special needs should be an integral part of the student body. Students in our Occupational Entrance Course (grades 7, 8, 9, and 10) have been placed in homerooms along with other students of their grade. These students have also been mixed in with all others from their grade in home economics, industrial arts, art, music, and physical education. Provision has been made for OEC students to move up to phase 3 in one or two subjects if they can do the work, so that they now have more incentive to work.

An interesting aspect of our attempt to individualize is called Quest. Quest programs, now in operation for several years, enable students to earn credits for self-initiated programs or projects approved for this purpose. This started slowly, with a few students each choosing a project and presenting it to the teacher who would supervise it. Teachers approved or rejected the proposals on the basis of their worth and their appropriateness to the students' maturity. Quest has grown to involve many teachers and students. The following are typical examples:

In grade 9, five students studied library science with a librarian; one took radio programming and another radio and journalism under an English teacher. In grade 10, three students, working with three different social studies teachers, delved into areas of history that interested them. In grade 11, such topics as future air transportation, psychology of adolescence, modern literature, art, and electronics have produced worthwhile projects. Three projects took students out into the community: five girls took

office practice and worked a half-day per cycle in the office of an elementary school; six students studied community involvement with a teacher through films, psychology, and personal relations and worked with children in our feeder elementary schools a half-day per cycle; five girls under the supervision of a teacher and a supervisor of nurses spent a half-day per cycle working in a hospital. Teachers maintained constant contact with all of these students and rated their work on the same basis as any other part of the program.

Our experimental role allowed us to vary the prescribed curriculum, but we have made little change in the compulsory subjects as our students must meet university entrance requirements. However, since there are no final examinations, some variation in content and methods of instruction has been introduced.

All students take English to the end of grade 12, but the traditional approach has disappeared. Students and teachers sit around in groups and discuss plays, poems, and novels. Now, instead of reading a few prescribed novels, the student makes his own selection from the large number offered and also chooses his teacher. Plays come to life as the students present them. A wealth of supplementary material – including Scholastic Book Units, Voices of Man Literature Series, records, tapes, and transparencies – is used. Work is done to improve reading skills and several teachers are trained to deal with reading problems. Communication between teachers and students is vastly improved.

The social studies department has made no drastic changes but has adapted the prescribed courses to their needs. Social studies is compulsory to the end of grade 11, but removal of the departmental examination has reduced emphasis on set course content. Here, too, communication has improved.

Our greatest successes and our worst failures have been in mathematics. The variety of Department of Education courses made departure from the prescribed texts unnecessary, but the mathematics department determined course content and established an orderly sequence of units for each level. Individual, small-group, classroom-size, and large-group instruction have been used as required. Since students progress at their own rate at all levels, some have finished the mathematics program at the end of their eleventh or part way through their twelfth year. Any who were not enrolled in calculus at the university were given an opportunity to take an introductory course in calculus.

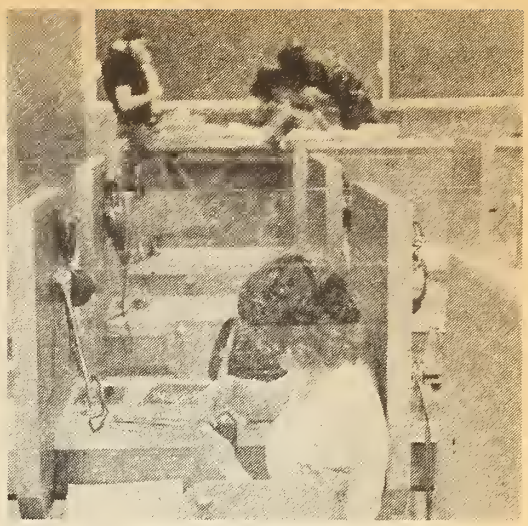
The Gordon Bell Experiment proved particularly challenging for the science department. The different branches of science made it almost impossible to keep the courses so parallel that students might move from one phase to another during the year. In an attempt to resolve this problem, the science teachers experimented with various combinations and better and better programs resulted. Significant among them was WISP (Winnipeg Integrated Science Program), a phase 1 grade 10 program designed to integrate physics, chemistry, and biology. It was an excellent course but too difficult for other than exceptionally bright students, and when its originators left at the end of the year it was discontinued. WISP did, however, give one group of students an unusually good start in science and in a few cases contributed to outstanding achievement later on.

It is in the matter of options that the experiment has proved most interesting and challenging. At first the students were very conservative in their choices, but the wide range of options available gradually had its effect. Our experience has very definitely been that the teachers were the real innovators and changes in the thinking of students and parents came largely as a result of their influence.

I have already dealt with the many opportunities provided by Quest. But other special opportunities were available to students too. We removed the grade requirements from some options and offered them without regard to grade level. Typing – an option for grades 10 to 12 – became available to grade 9 students, and as a result many students developed this skill early and took sciences or other subjects required for university entrance at the higher levels. American history – another option freed from the grade restriction – brought together in one class students from grades 9, 10, and 11.

In a few cases, options have had a successful trial year and have then been modified or discontinued for a variety of reasons. But some options have enjoyed immediate and lasting popularity. Outstanding among these has been computer science. We got an early start in this option – even before it was offered as a pilot course by the Department of Education. Eighteen of our brighter grade 10 and 11 students went to the University of North Dakota in Grand Forks for a week one June, and the following year a professor from the university came to the school, without charge, after 4 o'clock one day a week. The class was well attended, but the real boost came when we got an IBM keypunch in the school. The next year an enthusiastic group of students wanted to take computer science. Since we had no teacher, we recruited two grade 12 boys who had studied in Grand Forks and with the professor. The year went well and the next year we got the first of the three qualified teachers now on the staff. Many of our students obtained the equivalent of computer science 205 and 305 and went on to further work on a non-credit basis in a Quest program.

Among other interesting and highly successful options have been Modern Problems, Political Science, Sociology and Anthropology, Space and Man (adapted from the Ontario course), Leadership (an athletics course offered



in two consecutive options), French culture, and Manitoba Mosaic (an option in social studies). Not all the options offered have found acceptance, but the students have finally begun to make suggestions concerning options they would like to see offered – something they have been asked to do from the beginning of the experiment.

A valuable part of the experiment has been what we call 'intra-curricular periods.' Introduced as a means of humanizing staff–student relationships, they bring teachers and students together in a relaxed atmosphere to pursue non-credit courses such as typing, drama, psychology, and journalism and to enjoy recreational activities such as golf, badminton, table tennis, crokinole, chess, bridge, and sometimes political discussions.

We have heard a great deal in recent years about the community's desire to be involved in education and throughout the experiment we have kept this in mind. We have held open houses, panel discussions, seminar groups, teach-ins for parents – everything that we felt would help to bridge any gap that might exist between parents and the school. In November 1971, at a parents' night involving the teachers and parents of Gordon Bell and four feeder schools, we had seminar discussions with the best leaders we could find. In the hope of learning exactly how the parents wished to be involved in school affairs, we offered a group on Communications with the Community. It was one of the more poorly attended groups. The parents made it clear that their concern was with matters that related directly to the progress of their children. They seemed content to leave education to the experts and happy with what was going on in the schools.

We have found the community a rich source of educational experiences, and our attempt to create a vital learning situation has involved people from many walks of life. Field trips have become a regular part of our program, as has use of the Archives, the public library, and the university libraries. The students have been active in our search for new experiences. One group of grade 9 boys, accompanied by a teacher, identified the local spots of historical interest and later conducted tours of them for grade 6 students.

In September 1971 we introduced open-campus privileges – freedom for senior students to leave the school for any periods not scheduled for classes. This represented a further attempt to let the students decide when they would do their work. Many of the changes made and the privileges granted in connection with the experiment have been designed to provide experiences that foster student maturity.

A significant aspect of any experiment involving a school is the dropout rate. Because of the many circumstances that affect the situation, it is difficult to determine what bearing the experiment has had on it. However, we feel that we have held many students who would have dropped out of the traditional setting. Certainly the enrollment figures indicate that students have tended to stay in school.

As might be expected, trial and error have had a part in the experiment. We started out with continuous progress (everybody passes) but later modified our concept and introduced a credit system. We tried, unsuccessfully, to drop grade nomenclature, and then resorted to speaking in terms of years ('the ninth year'). We have been challenged from the beginning by timetable problems – a computer timetable cannot meet our needs. We have given cross-grade groupings only limited trial and hope to extend this in the future. Our use of cross-disciplinary teams has been limited too, but again we plan to experiment more widely.

We have, of course, had our moments of doubt and anguish and we have even been accused of being on the wrong track. But we have made progress, and for the most part we are pleased with what has happened. We have pioneered in many areas: if, as someone has said, much of what we are doing today is the rule rather than the exception, the Gordon Bell Experiment has figured significantly in much-needed educational change. There is much still to be done, and tried, and learned, and we are eager to continue the experiment.

Note: Mr. Hodgkinson retired from Gordon Bell in June 1973. H. E. Lother, the present principal, comments on a few more recent changes.

'All of those things that are mentioned by Mr. Hodgkinson are continuing. But this year we have also instituted a system of Faculty Advisors for grade VII students, whereby each Faculty Advisor meets with three to five grade VII students to discuss problems several times a cycle. We have also set up teachers' committees to study the credit system, alternate forms of educational organization, and local budgeting. We are also embarking on a program of "vertical articulation," involving the interchange of Gordon Bell (secondary) teachers with teachers in our elementary feeder schools.'

Marian L. Worthen,
Editorial Division, OISE

The Italian in Transition

What are the difficulties in switching from one country to another? What are the problems that accompany the transition? How do parents and children cope with these problems that must be solved before a good life in a new country becomes a comfortable reality? *The Italian in Transition*, a color documentary film, presents these problems and offers solutions for young immigrants and their families. Produced by the Ontario Institute for Studies in Education and filmed in Italy and Canada, it is an exercise in the 'before and after,' beginning with a look at the two-thousand-year-old Italian cultural heritage and the Italian way of life and then moving through the trauma of arriving on the Canadian scene, when culture shock is the inevitable result.

The film's emphasis is on the relationship of immigrant students and their parents to schools; its aim is to orient and sensitize teachers-in-training and educators in general to the difficulties encountered by those making the transition, and to suggest ways of easing the situation. Through contrasting the Italian and Canadian school systems and examining the attitudes and values of the Italian family first in Italy and then in Canada, it presents the story of a painful change.

The problems are presented in realistic and sympathetic fashion. In the immigrant child's first days at school in his new country, he cannot speak the language and everything seems to be a blur – 'The child has kind of a nightmare effect for the first little while. I remember this kind of dream that you were still in Italy and yet realizing that you were here.' His sense of isolation is heightened because he is forbidden to participate in the extracurricular activities of the school – the immigrant parent does not view school as a place for play, but as a stern disciplinarian, imposing lots of homework. Obviously the question is, how can schools best accommodate the students *and the parents*? A teacher of immigrant children says, 'I think it's important that teachers realize the home situation is very different from that of the Canadian. The Italian home has special rules, special patterns, special routines; the parents are to be respected at all times and they aren't to be questioned.'

Perhaps the most fundamental underlying problem of successful integration of all New Canadians is how to bring the ethnic mosaic into a Canadian frame. The Canadian says, 'Get the immigrants out of their ghettos and into the community at large,' but the immigrant clings fiercely and proudly to his cultural heritage lest it be lost – 'They seem to live very much within their own ethnic group, within their own ethnic community. The only place where the child learns about Canadian culture is at school.' Teachers in their turn are sensitive to the danger of splitting the children off from their parents and thereby creating too much of a cultural gap.

The Italian in Transition brings new understanding to a continuing problem and asks searching questions as an aid to solution. The film takes the teacher to Italy, enabling her to see how her pupils reacted to influences in an indigenous setting, and by the process of comparison puts the problem of the immigrant child into focus. It urges closer personal contact between teachers and immigrant families in the attempt at bettering the latter's integration in the new country.

The film is for school staff, for parent–teacher and church groups, for sociology and Man in Society courses, for government and political organizations, and for teachers of English as a second language. *La Voce*, a Toronto Italian newspaper, calls it 'an honest film, sincere, open-minded and receptive, worthy of the highest praise of our community.' It has received an Award of Merit from the First Canadian Festival of Internationally Produced Instructional Media held at the 1973 Canadian Education Showplace. It is a film for all who care about the adjustment of the newcomer.

The Italian in Transition is a 16 mm. color film, 26 minutes long, available with either an English or an Italian sound track. The purchase price is $200. It can be previewed at a cost of $15. Requests should be accompanied by a check or money order payable to OISE; in the event of purchase, the previewing fee will be deducted from the full price. (Unfortunately, previewing privileges cannot be extended outside of Canada because of the many difficulties encountered in getting the film back and forth across the border.) Requests for previewing or purchase should be addressed to Merilyn Peruniak, Editorial Division, Ontario Institute for Studies in Education, 252 Bloor Street West, Toronto, Ontario M5S 1V6. Requests for purchase must specify English or Italian sound track.

Ontario Ministry of the Environment

There's a new world coming – a world where man lives in harmony with his environment – and it's being built in your classrooms.

Today's young people are the first generation to realize the importance and relevance of population, pollution, and diminishing resources. They look to you, the educators, for information.

This brochure is an outline of the basic services we offer in environmental education programming. But it's just an outline. You may have ideas of your own that don't fit into these programs. If that's the case, give us a call. We'll work something out.

Besides, we like new ideas. They keep our program healthy.

An Environmental Viewpoint
Environmental education is a matter of attitudes and values. It's not the easiest area to teach, but it can be rewarding for both the student and the teacher.

Basically, the Ontario Ministry of the Environment wants to help you to develop your students' environmental outlook. The Ministry is the provincial agency responsible for pollution control in Ontario. There are four operating divisions:

1. Water Resources Division
2. Water Supply and Pollution Control Division
3. Air and Land Pollution Control Division
4. Laboratory and Research Division

Educational Resources Section (Information Services Branch)
This section is responsible for liaison with the school systems of the province. We are a teacher-oriented section offering guidance and resources for environmental education.

Our Services
Teachers' Environmental Seminars, Workshops, Conferences for professional development days. Speakers, handout materials, and conference design assistance are available upon request from coordinators.

Printed Environmental Resources Materials for teacher and student research, projects, assignments. Designed for elementary, secondary, and postsecondary students, our printed services include:

Enviropak (resource kits for students and teachers)

Environment Resource Manual (a three-ring binder covering various aspects of pollution control in Ontario)

Legacy (a tabloid for those interested in environmental enhancement – published every other month)

For a complete reference, ask for our publications list.

'The Straight Goods' Youth Conference on the environment is a conference for secondary school students in Ontario. One student delegate from each secondary school in the province is invited to represent his or her school. Students and environmental pollution experts rap in as open a forum as possible. That's why the conference is called 'The Straight Goods.' It is jointly sponsored by the Ministry of the Environment and a host university.

The Educational Resources Section, in cooperation with classroom teachers, offers student and teacher day and half-day programs incorporating environmental management themes on an indoor and outdoor basis.

Audio Visual Aids (See Films below)

The above information is found in the pamphlet *Environmental Education . . . It's a Whole New World* and is reprinted here at the request of the Ministry. Inquiries regarding services and publications should be directed to:

Educational Resources
Coordinator
Information Services Branch
Ontario Ministry of the
Environment
135 St. Clair Avenue West
Toronto, Ontario M4V 1P5
Telephone: (416) 965-7117

Publications
Ministry of the Environment printed materials are available free on request; a complete checklist and order form appear in the pamphlet *Publications.* The Ministry suggests that interested persons obtain a copy of *Publications* from the above address before requesting materials.

'You can help put nature's colours back in our environment'
A 30" by 40" wall chart designed for classroom use. Brilliant color is used to show that control of environmental pollution brings a dramatic response from plant and animal life. The chart tells what pollution is, how it affects our environment, and what can be done about it.

Films
All titles listed are 16mm. color films.

The Choice Is Yours (13 minutes)
The significance of water in Ontario's development is highlighted in this look at present-day pollution. The film reviews government responsibility for water pollution control and appeals for public help.

The Invisible River (19 minutes)
The film follows the construction of a water supply system to carry water from the Great Lakes to an inland community and compares the task to building a sand castle on the beach. Produced for a general audience, it holds special appeal for young people.

The River Must Live (21 minutes)
A European-made film that studies pollution and what happens when it goes unchecked in a watercourse. Solutions are proposed and treatment methods discussed.

Clean Water, It's Your Decision (14 minutes)
The growing need for adequate pollution control is the theme of this lively examination of the causes of pollution and means of preventing it. A brief discussion of the purification of drinking water is included.

A Matter of Attitudes (29 minutes)
Also available in black and white.
A Canadian film inquiry into the problems of air and water pollution. Technical personnel and a cross-section of other citizens express opinions. Recommended for adult viewing.

Environment Ontario (23 minutes)
The film reviews Ontario's pollution problems and their solution and discusses the role of the Ministry of the Environment.

Teamwork (23 minutes)
The film shows that protection of our water resources is the joint responsibility of government and the general public. Recommended for all audiences.

Films are *not* circulated by the Ministry. Requests should be made by letter to the following address at least three weeks before the date of showing. (Please include alternative dates.)

Modern Talking Picture Service
1875 Leslie Street
Don Mills, Ontario M3B 2M6
Telephone: (416) 444-7347

Other films on environmental studies may be obtained from your nearest office of the National Film Board of Canada.

William Burgess School

Profile of a School/23

When it was first opened in 1915, William Burgess School (or Todmorden New School, as it was then called) had a rural setting in East York 'Far from the madding crowd's ignoble strife.' Since then, as well as getting an architectural face-lift, this K–6 public school has been caught up in two profound changes: it has become embedded in the sprawling urban growth of Toronto, and during the past twenty years it has witnessed the surrounding community shift from one that was predominantly Anglo-Saxon to one that is predominantly Greek, Yugoslavian, and Italian. About sixty percent of the 700 children attending the school are of Greek origin, and most of them come from homes where only Greek is spoken.

Within the framework of a fairly conventional instructional program, Jim Burns (who has been principal for the past six years) has tried to adapt the school to the community it serves. His staff are sensitive to the language and spelling difficulties that face many of the students, and parent volunteers, under guidance from a reading specialist, help the children on an individual basis with their reading problems. Every morning classes of language instruction are held for New Canadians who enter the school at levels other than kindergarten. And there are four special education classes: three for slow learners and one for children with specific learning difficulties.

The school is a happy one. But Mr. Burns finds that many parents are perplexed when it does not operate on a pattern that meets their expectations – in Greece, for example, the strap is still the usual form of punishment. But as far as possible, he has opened the doors of his school to parents so they can see what is happening for themselves, and two mornings a week mothers of the children and other interested women gather in the school to meet each other and to get to know about a Canadian community. In addition, efforts are made to introduce the children to typical Canadian customs. 'Otherwise,' says Mr. Burns, 'many of them live in such confined ethnic enclaves that they would remain as strangers in another land, unacquainted, say, with such a common dish as apple pie.'

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